

**Inspection Form**

FOIA Exemption: All (b)(6) -

**Form FTA-IR-1**United States Department of Transportation  
Federal Transit Administration**Agency/Department Information**

<b>Inspection Date</b>	YYYY	MM	DD	<b>Report Number</b>	20170103-WMATA-WP-1		
	2017	01	03				
<b>Rail Agency Name</b>	Washington Metropolitan Area Transit Authority			<b>Rail Agency Department</b>	RTRA	<b>Sub- Department</b>	N/A
<b>Rail Agency Department Contact Information</b>	<b>Name</b>		<b>Email</b>		<b>Office Phone</b>		<b>Mobile Phone</b>
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
<b>Inspection Location</b>	E Line, Shaw-Howard University and Branch Ave						

**Inspection Summary**

<b>Inspection Activity #</b>	1	2	3	4	5	6
<b>Activity Code</b>	RTRA-RI-OBS					
<b>Inspection Units</b>	1					
<b>Inspection Subunits</b>	N/A					
<b>Defects (Number)</b>	0					
<b>Recommended Finding</b>	No					
<b>Remedial Action Required<sup>1</sup></b>	No					
<b>Recommended Reinspection</b>	No					

**Activity Summaries**

<b>Inspection Activity #</b>	1	<b>Inspection Subject</b>					Rail Compliance Observation			<b>Activity Code</b>		RTRA	RI	OBS
<b>Job Briefing Employee Name/Title</b>						<b>Accompanied Inspector?</b>	No	<b>Out Brief Conducted</b>	No	<b>Time</b>	0700-1100	<b>Outside Shift</b>	No	
<b>Related Reports</b>	N/A					<b>Related CAPS / Findings</b>		N/A						
<b>Related Rules, SOPs, Standards, or Other</b>	<b>Ref</b>		<b>Rule or SOP</b>			<b>Standard</b>		<b>Other / Title</b>		<b>Checklist Reference</b>				
	MetroRail Safety Rules and Procedures Handbook Permanent Order No. T-16-07		MSRPH General Rules 1.46-1.52 1.69-1.84 MSRPH Operating Rules 3.87 3.119, 3.120, 3.121, 3.121.1, 3.79.1, 3.141 SOP# 12, 15, 16, 35, 45, 50											
<b>Inspection Location</b>	<b>Main Track</b>	<b>Yard</b>	<b>Station</b>	<b>OCC</b>	<b>RTA Facility</b>	<b>FTA Office</b>	<b>Track Type</b>	<b>At-grade</b>	<b>Tunnel</b>	<b>Elevated</b>	<b>N/A</b>			
	x		x									x		
<b>Line(s)</b>	E Line	<b>Track Number</b>	N/A	<b>Chain Marker and/or Station(s)</b>	<b>From</b>				<b>To</b>					
					Shaw-Howard U				Branch Ave					

<sup>1</sup> The rail transit agency must provide FTA with the necessary evidence (e.g. maintenance work order system records, photos, documentation, records, data, or other evidence) to close out the Remedial Action. Closeout of Remedial Actions may also be subject to ongoing FTA verification inspections to ensure corrections are sufficient and effective.

<b>Inspector in Charge - Signature</b> WINSLOW L. POWELL		<small>Digitally signed by WINSLOW L. POWELL DN: cn=US, o=U.S. Government, ou=DOT Headquarters, ou=FTAHQ, cn=WINSLOW L. POWELL Date: 2017.01.10 11:28:23 -0500</small>	<b>Date</b>
<b>Inspector in Charge - Name</b> Winslow Powell	<b>Inspection Team</b> Chris Difatta		



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<b>Vehicles</b>	Head Car Number	Number of Cars	<b>Equipment</b>	N/A	
	N/A	N/A			
<b>Description</b>	The FWSO inspector conducted a rail compliance observation on the E line and observed a total of 15 trains.			<b>Number of Defects</b>	0
	<p>The FWSO inspector positioned himself at the 8 car berthing mark on the Shaw-Howard University station platform and watched for train operator compliance with the following requirements:</p> <ul style="list-style-type: none"> <li><u>Train Handling:</u> <ul style="list-style-type: none"> <li>Operated to 8 car station berthing marker at the end of the platform.</li> <li>Head was out of the window when stopping an 8 car consist.</li> <li>Application of good train handling with smooth station stops and smooth and even acceleration and deceleration.</li> </ul> </li> <li><u>Stations and Doors:</u> <ul style="list-style-type: none"> <li>Verified platform side of the train by sticking his/her head out of the cab window.</li> <li>Looked at doors on platform side of train to verify any activity in front of the doors for five (5) seconds before opening the doors.</li> <li>Opened the doors on the correct platform side and made station announcements.</li> <li>Observed train loading with head outside cab window to ensure that customers were not hit or trapped within doors.</li> <li>Closed the window and looked in the direction of travel before moving the train forward.</li> </ul> </li> </ul> <p>No exceptions were taken during the observations. The FWSO inspector then observed trains from Shaw-Howard University station to Branch Ave to check compliance with the following train operator requirements:</p> <ul style="list-style-type: none"> <li><u>Fitness for Duty:</u> <ul style="list-style-type: none"> <li>Operators were in proper uniform and without the appearance of being under the influence of alcohol or impaired by drugs.</li> </ul> </li> <li><u>Announcements:</u> <ul style="list-style-type: none"> <li>Made proper announcements when departing initial terminal.</li> <li>Made proper announcements when berthed at the station.</li> <li>Made announcement when train stopped due to another train crossing over.</li> <li>Made proper announcements when train would be arriving at terminal.</li> </ul> </li> <li><u>Train Horn Communication:</u> <ul style="list-style-type: none"> <li>All Operators were in compliance with MSRP Operating Rules 3.87 and 3.168.</li> </ul> </li> </ul> <p>No exceptions were taken during this observation.</p>			<b>Recommended Finding?</b>	No
				<b>Remedial Action Required?</b>	No
				<b>Recommended Reinspection?</b>	No
	<b>Remedial Action</b>	N/A			



# Inspection Form

FOIA Exemption: All (b)(6)

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United States Department of Transportation  
Federal Transit Administration

## Agency/Department Information

Inspection Date	YYYY	MM	DD	Report Number	20170104-WMATA-WP-1		
	2017	01	04				
Rail Agency Name	Washington Metropolitan Area Transit Authority			Rail Agency Department	TRST	Sub- Department	TKIN
Rail Agency Department Contact Information	Name			Email		Office Phone	
	[REDACTED]			[REDACTED]		[REDACTED]	
	[REDACTED]			[REDACTED]		[REDACTED]	
	[REDACTED]			[REDACTED]		[REDACTED]	
	[REDACTED]			[REDACTED]		[REDACTED]	
Inspection Location	Farragut West (C Line, Track 1)						

## Inspection Summary

Inspection Activity #	1	2	3	4	5	6
Activity Code	TRK-JSB-OBS	TRK-WI-PI				
Inspection Units	1	1				
Inspection Subunits	0	1				
Defects (Number)	1	3				
Recommended Finding	No	Yes				
Remedial Action Required <sup>1</sup>	No	Yes				
Recommended Reinspection	No	Yes				

## Activity Summaries

Inspection Activity #	1	Inspection Subject					Job Safety Briefing			Activity Code		TRK	JSB	OBS
Job Briefing Employee Name/Title	TRST 6031					Accompanied Inspector?	No	Out Brief Conducted	No	Time	1000-1300	Outside Shift	No	
Related Reports	N/A					Related CAPS / Findings			N/A					
Related Rules, SOPs, Standards, or Other	Ref		Rule or SOP			Standard			Other / Title		Checklist Reference			
	RWPM													
	MSRPH													
Inspection Location	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	Track Type	At-grade	Tunnel	Elevated	N/A			
	X								X					
Line(s)	C	Track Number	1	Chain Marker and/or Station(s)			From		To					
							C1 30+00		C1 58+00					
Vehicles	Head Car Number		Number of Cars			Equipment	N/A							
	N/A		N/A											
Description	The job safety briefing to the work gang was inaudible when initially given by TRST 6031 on the Farragut West station platform prior to accessing the right-of-way								Number of Defects		1			
									Recommended Finding?		No			

<sup>1</sup> The rail transit agency must provide FTA with the necessary evidence (e.g. maintenance work order system records, photos, documentation, records, data, or other evidence) to close out the Remedial Action. Closeout of Remedial Actions may also be subject to ongoing FTA verification inspections to ensure corrections are sufficient and effective.

Inspector in Charge - Signature		Digitally signed by WINSLOW L. POWELL DN: cn=US, o=U.S. Government, ou=DOT Headquarters, ou=FTAHQ, cn=WINSLOW L. POWELL Date: 2017.01.09 12:29:00 -05'00'	Date
WINSLOW L. POWELL			
Inspector in Charge - Name	Inspection Team		
Winslow Powell	Chad Broski, Al Nepa		



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	(ROW). FWSO requested that the job safety briefing be moved to a quieter location. TRST 6031 moved the gang to an enclosed room within the Farragut West station. TRST 6031 then provided a comprehensive job safety briefing that could be effectively heard by all members of the work gang. The briefing included the work limits, the supervisory power outage, the protection that would be used (Inaccessible Track), hazards that would be encountered, and the required Personal Protective Equipment (PPE). TRST 6031 also reviewed the Roadway Access Guide pertaining to our inspection limits. He then ensured that the gang members had the required PPE and the proper RWP training. He also required all gang members to acknowledge understanding of the on-track safety procedures by having them sign the job safety briefing form.						<b>Remedial Action Required?</b>		No	
							<b>Recommended Reinspection?</b>		No	
<b>Remedial Action</b>	N/A									

<b>Inspection Activity #</b>	2		<b>Inspection Subject</b>				Observation of Work Zone			<b>Activity Code</b>		TRK	WI	PI	
<b>Job Briefing Employee Name/Title</b>	TRST 6031				<b>Accompanied Inspector?</b>		No		<b>Out Brief Conducted</b>		No	<b>Time</b>	1000-1300	<b>Outside Shift</b>	No
<b>Related Reports</b>	N/A				<b>Related CAPS / Findings</b>			N/A							
<b>Related Rules, SOPs, Standards, or Other</b>	Ref		Rule or SOP			Standard			Other / Title			Checklist Reference			
	RWPM					TRST 1000									
	MSRPH														
<b>Inspection Location</b>	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	<b>Track Type</b>	At-grade	Tunnel	Elevated	N/A				
	X									X					
<b>Line(s)</b>	C		<b>Track Number</b>		1		<b>Chain Marker and/or Station(s)</b>		From		To				
									C1 30+00		C1 58+00				
<b>Vehicles</b>	<b>Head Car Number</b>			<b>Number of Cars</b>			<b>Equipment</b>	N/A							
	N/A			N/A											
<b>Description</b>	<p>FWSO performed a track inspection between chain markers (CM) C1 30+00 and C1 58+00.</p> <ul style="list-style-type: none"> <li>FWSO closed remedial action 324, which required WMATA to elevate the 3<sup>rd</sup> rail power cable from invert at CM 50+40.</li> <li>FWSO noted that the Inaccessible Track (IT) Protection was properly configured at CM C1 30+00.</li> <li>FWSO noted that the 3<sup>rd</sup> rail warning devices (WSAD) were positioned throughout the work area so that every member of the work crew would be able to see and hear the alarms.</li> </ul> <p>Additional observations:</p> <ul style="list-style-type: none"> <li>WMATA's planned production work in the work area includes replacing/repairing direct fixation fasteners that should address open remedial action 300.</li> <li>FWSO noted 160 inches between non-defective fasteners for the low rail in a curve at CM C1 55+70. Gauge measured 57 inches at this location. The WMATA representative indicated that a slow order would be placed to protect the condition until the production gang repairs the grout pads and direct fixation fasteners. A production gang was in the process of building the wood forms that were necessary to pour the new grout while FWSO was conducting the inspection.</li> <li>FWSO noted rail lying in the ROW along the curve between CM C1 53+00 and CM C1 58+00, which can be a tripping hazard.</li> <li>FWSO noted a 3<sup>rd</sup> rail cover board missing along the Farragut West station platform at approximately CM C1 43+00.</li> </ul>							<b>Number of Defects</b>		3					
								<b>Recommended Finding?</b>		Yes					
								<b>Remedial Action Required?</b>		Yes					
								<b>Recommended Reinspection?</b>		Yes					
<b>Remedial Action</b>	<ul style="list-style-type: none"> <li>WMATA must apply a speed restriction at CM C1 55+70 until the defective fixation fasteners are repaired.</li> <li>WMATA must remove the rail lying along the ROW.</li> <li>WMATA must replace the 3<sup>rd</sup> rail cover board at approximately CM C1 43+00.</li> </ul>														

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Federal Transit Administration**Agency/Department Information**

<b>Inspection Date</b>	YYYY	MM	DD	<b>Report Number</b>	20170104-WMATA-WP-2		
	2017	01	04				
<b>Rail Agency Name</b>	Washington Metropolitan Area Transit Authority			<b>Rail Agency Department</b>	RTRA	<b>Sub- Department</b>	N/A
<b>Rail Agency Department Contact Information</b>	<b>Name</b>		<b>Email</b>		<b>Office Phone</b>		<b>Mobile Phone</b>
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
<b>Inspection Location</b>	D Line, New Carrollton — Federal Center SW						

**Inspection Summary**

<b>Inspection Activity #</b>	1	2	3	4	5	6
<b>Activity Code</b>	RTRA-RI-OBS					
<b>Inspection Units</b>	1					
<b>Inspection Subunits</b>	N/A					
<b>Defects (Number)</b>	0					
<b>Recommended Finding</b>	No					
<b>Remedial Action Required<sup>1</sup></b>	No					
<b>Recommended Reinspection</b>	No					

**Activity Summaries**

<b>Inspection Activity #</b>	1	<b>Inspection Subject</b>					Rail Compliance Observation		<b>Activity Code</b>		RTRA	RI	OBS
<b>Job Briefing Employee Name/Title</b>						<b>Accompanied Inspector?</b>	No	<b>Out Brief Conducted</b>	No	<b>Time</b>	1100-1500	<b>Outside Shift</b>	No
<b>Related Reports</b>	N/A					<b>Related CAPS / Findings</b>		N/A					
<b>Related Rules, SOPs, Standards, or Other</b>	<b>Ref</b>		<b>Rule or SOP</b>		<b>Standard</b>		<b>Other / Title</b>		<b>Checklist Reference</b>				
	MetroRail Safety Rules and Procedures Handbook Permanent Order No. T-16-07		MSRPH General Rules 1.46-1.52 1.69-1.84 MSRPH Operating Rules 3.87 3.119, 3.120, 3.121, 3.121.1, 3.79.1, 3.141 SOP# 12, 15, 16, 35, 45, 50										
<b>Inspection Location</b>	<b>Main Track</b>	<b>Yard</b>	<b>Station</b>	<b>OCC</b>	<b>RTA Facility</b>	<b>FTA Office</b>	<b>Track Type</b>	<b>At-grade</b>	<b>Tunnel</b>	<b>Elevated</b>	<b>N/A</b>		
	x		x									x	
<b>Line(s)</b>	Orange	<b>Track Number</b>	N/A	<b>Chain Marker and/or Station(s)</b>	<b>From</b>				<b>To</b>				
					New Carrollton				Federal Center SW				

<sup>1</sup> The rail transit agency must provide FTA with the necessary evidence (e.g. maintenance work order system records, photos, documentation, records, data, or other evidence) to close out the Remedial Action. Closeout of Remedial Actions may also be subject to ongoing FTA verification inspections to ensure corrections are sufficient and effective.

<b>Inspector in Charge - Signature</b> WINSLOW L. POWELL		<b>Date</b>
<small>Digitally signed by WINSLOW L. POWELL DN: cn=US, o=U.S. Government, ou=DOT Headquarters, ou=FTAHQ, cn=WINSLOW L. POWELL Date: 2017.01.30 12:41:04 -0500</small>		
<b>Inspector in Charge - Name</b> Winslow Powell	<b>Inspection Team</b> Chris Difatta	



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Vehicles	Head Car Number	Number of Cars	Equipment	N/A		
	N/A	N/A				
Description	<p>The FWSO inspector conducted a rail compliance observation on the D line and observed a total of 12 trains.</p> <p>The FWSO inspector positioned himself at the 8 car berthing mark on the Minnesota Ave station platform and watched for train operator compliance with the following requirements:</p> <ul style="list-style-type: none"><li>• <u>Train Handling:</u><ul style="list-style-type: none"><li>○ Operated to 8 car station berthing marker at the end of the platform.</li><li>○ Head was out of the window when stopping an 8 car consist.</li><li>○ Application of good train handling with smooth station stops and smooth and even acceleration and deceleration.</li></ul></li><li>• <u>Stations and Doors:</u><ul style="list-style-type: none"><li>○ Verified platform side of the train by sticking his/her head out of the cab window.</li><li>○ Looked at doors on platform side of train to verify any activity in front of the doors for five (5) seconds before opening the doors.</li><li>○ Opened the doors on the correct platform side and made station announcements.</li><li>○ Observed train loading with head outside cab window to ensure that customers were not hit or trapped within doors.</li><li>○ Closed the window and looked in the direction of travel before moving the train forward.</li></ul></li></ul> <p>No exceptions were taken during the observations. The FWSO inspector then observed trains from New Carrollton to Federal Center to check compliance with the following train operator requirements:</p> <ul style="list-style-type: none"><li>• <u>Train Operator Adherence to Electronic Device Policy:</u><ul style="list-style-type: none"><li>○ Train Operators were in compliance with MSRP General Rules 1.46-1.52 and MSRP Safety Rule 4.227.</li></ul></li><li>• <u>Train Handling:</u><ul style="list-style-type: none"><li>○ Operated to 8 car station berthing marker at the end of the platform.</li><li>○ Head was out of the window when stopping an 8 car consist.</li><li>○ Application of good train handling with smooth station stops and smooth and even acceleration and deceleration</li></ul></li></ul> <p>No exceptions were taken during observations.</p>			<b>Number of Defects</b>	0	
				<b>Recommended Finding?</b>	No	
				<b>Remedial Action Required?</b>	No	
				<b>Recommended Reinspection?</b>	No	
	Remedial Action			N/A		



# Inspection Form

FOIA Exemption: All (b)(6)

Form FTA-IR-1

United States Department of Transportation  
Federal Transit Administration

## Agency/Department Information

Inspection Date	YYYY	MM	DD	Report Number	20170105-WMATA-AMD-1		
	2017	01	05				
Rail Agency Name	Washington Metropolitan Area Transit Authority			Rail Agency Department	POWR	Sub- Department	CM
Rail Agency Department Contact Information	Name		Email		Office Phone		Mobile Phone
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
Inspection Location	A10 – Medical Center – Tie Breaker (TB)						

## Inspection Summary

Inspection Activity #	1	2	3	4	5	6
Activity Code	TP-RM-OBS					
Inspection Units	1					
Inspection Subunits	1					
Defects (Number)	0					
Recommended Finding	No					
Remedial Action Required <sup>1</sup>	No					
Recommended Reinspection	Yes					

## Activity Summaries

Inspection Activity #	1	Inspection Subject	A10 – Medical Center – Tie Breaker House – Emergency Trip Switch (ETS) Relay Cabinet Troubleshooting.				Activity Code	TP	RM	OBS	
Job Briefing Employee Name/Title	N/A		Accompanied Inspector?	Yes	Out Brief Conducted	Yes	Time	0100-0500	Outside Shift	Yes	
Related Reports			Related CAPS / Findings								
Related Rules, SOPs, Standards, or Other	Ref	Rule or SOP		Standard		Other / Title		Checklist Reference			
Inspection Location	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	Track Type	At-grade	Tunnel	Elevated	N/A
			X								
Line(s)	A Line	Track Number	N/A	Chain Marker and/or Station(s)		From		To			
						A10 – Medical Center		A10 – Medical Center			
Vehicles	Head Car Number		Number of Cars		Equipment	Emergency Trip Switch (ETS) Relay Cabinet					
	N/A		N/A								
Description	The WMATA Corrective Maintenance (CM) crew from K99 Yard (West Falls Church), which specializes in Emergency Trip Switch (ETS) troubleshooting and installation, was in attendance for the night shift. The job safety briefing was done by WMATA						Number of Defects		0		
							Recommended Finding?		No		
							Remedial Action Required?		No		

<sup>1</sup> The rail transit agency must provide FTA with the necessary evidence (e.g. maintenance work order system records, photos, documentation, records, data, or other evidence) to close out the Remedial Action. Closeout of Remedial Actions may also be subject to ongoing FTA verification inspections to ensure corrections are sufficient and effective.

Inspector in Charge - Signature	ANGELA M DLUGER	Digitally signed by ANGELA M DLUGER DN: c=US, o=U.S. Government, ou=FTA HQ, ou=DOT Headquarters, cn=ANGELA M DLUGER Date: 2017.02.03 13:56:03 -05'00'	Date February 3, 2017
Inspector in Charge – Name Angela Dluger	Inspection Team Tino Sahoo		



	<p>CM Power Supervisor and electricians prior to arriving at job site, and it outlined any safety hazards and work to be performed.</p> <p>The problem encountered was either a faulty relay (Figure 2) that was present in the ETS relay cabinet (Figure 1) or bad conductors from ETS box wayside to ETS relay cabinet were present (Figures 3,4,5). The ETS relay cabinet sends the “trip” signal to the appropriate DC feeder breaker to de-energize (open), which de-energizes the contact rail (3<sup>rd</sup> Rail) that it feeds whenever an ETS button is pushed at any of the ETS boxes located on the platform or wayside. The ETS boxes A113-A120 (Figure 6) wayside that were potentially affected were in the tunnel region between Medical Center and Bethesda metro station, not on the platform.</p> <p>In order to troubleshoot the problem, whether it was a bad conductor or relay, wayside access was needed to manually trip each ETS box (A113-A120) one at a time to determine if a relay was bad or conductors were corroded/degraded. Water intrusion is known to happen in the junction boxes where ETS conductors are present as this area has a low water table. The WMATA CM crew called the Rail Operations Control Center (ROCC) and tried to get wayside access in order to manually trip the ETS boxes (A113-A120) CM440+42 to CM 417+76, Track 1 and Track 2, but this area was under a supervisory outage for another maintenance crew, and access wayside was denied.</p> <p>The FWSO inspector recommends a re-inspection to verify whether the relay in the ETS cabinet or the conductors (water intrusion/corrosion/degradation) were the root cause of the problem and ensure the issue has been fixed. WMATA may also provide proof to FTA that the problem has addressed.</p>	<b>Recommended Reinspection?</b>	Yes
<b>Remedial Action</b>	N/A		





FIGURE 1 – ETS (EMERGENCY TRIP SWITCH) RELAY CABINET AT MEDICAL CENTER TIE BREAKER



FIGURE 2

(WAYS)



FIGURE 3 – CONDUIT RUN FROM ETS RELAY CABINET TO ETS BOXES



ETS RELAY CABINET TO ETS BOXES WAYSIDE CONTINUED

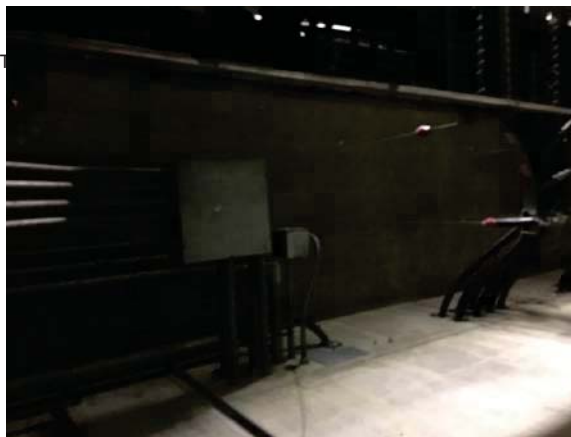


FIGURE 5 – CONDUIT RUN FROM ETS RELAY CABINET TO ETS BOXES WAYSIDE (JUNCTION BOX WHERE POSSIBLE WATER INTRUSION OF ETS CONDUCTORS)



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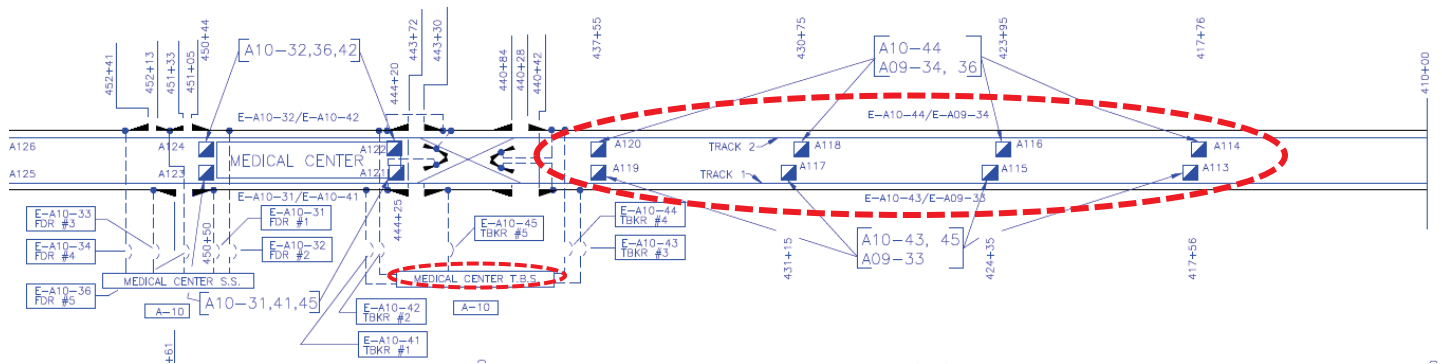


FIGURE 6 – CONTACT RAIL SCHEMATIC SHOWING WAYSIDE ETS BOXES POTENTIALLY AFFECTED (ONLY BOXES IN TUNNEL AND NOT ON PLATFORMS)

**Inspection Form**

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Federal Transit Administration**Agency/Department Information**

<b>Inspection Date</b>	YYYY	MM	DD	<b>Report Number</b>	20170105-WMATA-WP-1		
	2017	01	05				
<b>Rail Agency Name</b>	Washington Metropolitan Area Transit Authority			<b>Rail Agency Department</b>	RTRA	<b>Sub- Department</b>	N/A
<b>Rail Agency Department Contact Information</b>	<b>Name</b>		<b>Email</b>		<b>Office Phone</b>		<b>Mobile Phone</b>
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
<b>Inspection Location</b>	Yellow Line, L'Enfant Plaza to Huntington						

**Inspection Summary**

<b>Inspection Activity #</b>	1	2	3	4	5	6
<b>Activity Code</b>	RTRA-RI-OBS					
<b>Inspection Units</b>	1					
<b>Inspection Subunits</b>	N/A					
<b>Defects (Number)</b>	1					
<b>Recommended Finding</b>	Yes					
<b>Remedial Action Required<sup>1</sup></b>	No					
<b>Recommended Reinspection</b>	Yes					

**Activity Summaries**

<b>Inspection Activity #</b>	1	<b>Inspection Subject</b>					Rail Compliance Observation			<b>Activity Code</b>		RTRA	RI	OBS
<b>Job Briefing Employee Name/Title</b>	N/A			<b>Accompanied Inspector?</b>	No	<b>Out Brief Conducted</b>	No	<b>Time</b>	1130-1230	<b>Outside Shift</b>	No			
<b>Related Reports</b>	N/A			<b>Related CAPS / Findings</b>		N/A								
<b>Related Rules, SOPs, Standards, or Other</b>	Ref		Rule or SOP			Standard		Other / Title		Checklist Reference				
			MSRPH General Rules 1.46-1.52 1.69-1.84 MSRPH Operating Rules 3.87 3.119, 3.120, 3.121, 3.121.1, 3.79.1, 3.141 SOP# 12, 15, 16, 35, 45, 50											
<b>Inspection Location</b>	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	<b>Track Type</b>	At-grade	Tunnel	Elevated	N/A			
	x											x		
<b>Line(s)</b>	Yellow Line	<b>Track Number</b>	N/A	<b>Chain Marker and/or Station(s)</b>	From				To					
					L'Enfant Plaza				Huntington					

<sup>1</sup> The rail transit agency must provide FTA with the necessary evidence (e.g. maintenance work order system records, photos, documentation, records, data, or other evidence) to close out the Remedial Action. Closeout of Remedial Actions may also be subject to ongoing FTA verification inspections to ensure corrections are sufficient and effective.

<b>Inspector in Charge - Signature</b> WINSLOW L. POWELL		<small>Digitally signed by WINSLOW L. POWELL DN: cn=US, o=U.S. Government, ou=DOT Headquarters, ou=FTAHQ, cn=WINSLOW L. POWELL Date: 2017.01.10 11:33:32 -0500</small>		<b>Date</b>
<b>Inspector in Charge - Name</b> Winslow Powell		<b>Inspection Team</b> Chris Difatta		



United States Department of Transportation  
Federal Transit Administration

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Vehicles	Head Car Number	Number of Cars	Equipment	N/A	
	3164	6			
Description	<p>An FWSO Inspector conducted a rail compliance observation of one train on the Yellow Line between L'Enfant Plaza and Huntington and observed the following, including one defect:</p> <ul style="list-style-type: none"><li>• <u>Announcements:</u><ul style="list-style-type: none"><li>○ Made proper announcements when departing initial terminal.</li><li>○ Made proper announcements when berthed at the station.</li><li>○ Made announcement when train stopped due to another train crossing over.</li><li>○ Made proper announcements when train would be arriving at terminal.</li></ul></li><li>• <u>Train Operations through Work Zones/Passing Roadway Workers</u><ul style="list-style-type: none"><li>○ The train operator was in compliance with MSRPH Operating Rule 3.87 and Permanent Order No. T-16-07, Rev 1.</li><li>○ The train operator acknowledged hand signals and responded with two (2) short horn blasts.</li></ul></li><li>• <u>Train Horn Communications:</u><ul style="list-style-type: none"><li>○ Train operator did not comply with MSRPH Operating Rule 3.87.1 that states, "A rail vehicle shall sound their horns when entering and exiting tunnel portals."</li></ul></li></ul>			Number of Defects	1
				Recommended Finding?	Yes
				Remedial Action Required?	Yes
				Recommended Reinspection?	Yes
				Remedial Action	WMATA should explore and evaluate appropriate actions for noncompliance to SOP requirements.



# Inspection Form

FOIA Exemption: All (b)(6)

Form FTA-IR-1

United States Department of Transportation  
Federal Transit Administration

## Agency/Department Information

Inspection Date	YYYY	MM	DD	Report Number	20170105-WMATA-WP-2		
	2017	01	05				
Rail Agency Name	Washington Metropolitan Area Transit Authority			Rail Agency Department	RTRA	Sub- Department	N/A
Rail Agency Department Contact Information	Name		Email		Office Phone		Mobile Phone
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
Inspection Location	Yellow Line, L'Enfant Plaza station						

## Inspection Summary

Inspection Activity #	1	2	3	4	5	6
Activity Code	RTRA-RI-OBS					
Inspection Units	1					
Inspection Subunits	N/A					
Defects (Number)	0					
Recommended Finding	No					
Remedial Action Required <sup>1</sup>	No					
Recommended Reinspection	No					

## Activity Summaries

Inspection Activity #	1	Inspection Subject				Rail Compliance Observation			Activity Code		RTRA	RI	OBS
Job Briefing Employee Name/Title	N/A				Accompanied Inspector?	No	Out Brief Conducted	No	Time	1230-1500	Outside Shift	No	
Related Reports	N/A				Related CAPS / Findings		N/A						
Related Rules, SOPs, Standards, or Other	Ref		Rule or SOP			Standard		Other / Title		Checklist Reference			
	MetroRail Safety Rules and Procedures Handbook		MSRPH General Rules 1.46-1.52 1.69-1.84 MSRPH Operating Rules 3.87 3.119, 3.120, 3.121, 3.121.1, 3.79.1, 3.141 SOP# 12, 15, 16, 35, 45, 50										
Inspection Location	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	Track Type	At-grade	Tunnel	Elevated	N/A		
	x		x									x	
Line(s)	Yellow	Track Number	N/A	Chain Marker and/or Station(s)	From				To				
					L'Enfant Plaza				N/A				

<sup>1</sup> The rail transit agency must provide FTA with the necessary evidence (e.g. maintenance work order system records, photos, documentation, records, data, or other evidence) to close out the Remedial Action. Closeout of Remedial Actions may also be subject to ongoing FTA verification inspections to ensure corrections are sufficient and effective.

Inspector in Charge - Signature <b>WINSLOW L. POWELL</b> <small>Digitally signed by WINSLOW L. POWELL DN: cn=US, o=U.S. Government, ou=DOT Headquarters, ou=FTAHQ, cn=WINSLOW L. POWELL Date: 2017.01.10 11:34:47 -0500</small>		Date
Inspector in Charge - Name Winslow Powell	Inspection Team Chris Difatta	



Vehicles	Head Car Number	Number of Cars	Equipment	N/A	
	N/A	N/A			
Description	<p>The FWSO inspector conducted a rail compliance observation on the Yellow Line at L'Enfant Plaza station and observed a total of 9 trains.</p> <p>The FWSO inspector positioned himself at the 8 car berthing mark on the station platform and watched for train operator compliance with the following requirements:</p> <ul style="list-style-type: none"><li>• <u>Train Handling:</u><ul style="list-style-type: none"><li>○ Operated to 8 car station berthing marker at the end of the platform.</li><li>○ Head was out of the window when stopping an 8 car consist.</li><li>○ Application of good train handling with smooth station stops, and smooth and even acceleration and deceleration.</li></ul></li><li>• <u>Stations and Doors:</u><ul style="list-style-type: none"><li>○ Verified platform side of the train by sticking his/her head out of the cab window.</li><li>○ Looked at doors on platform side of train to verify any activity in front of the doors for five (5) seconds before opening the doors.</li><li>○ Opened the doors on the correct platform side, and made station announcements.</li><li>○ Observed train loading with head outside cab window to ensure that customers were not hit or trapped within doors.</li><li>○ Closed the window and looked in the direction of travel before moving the train forward.</li></ul></li></ul> <p>No exceptions were taken during observations.</p>			<b>Number of Defects</b>	0
				<b>Recommended Finding?</b>	No
				<b>Remedial Action Required?</b>	No
				<b>Recommended Reinspection?</b>	No
				<b>Remedial Action</b>	N/A



# Inspection Form

FOIA Exemption: All (b)(6)

Form FTA-IR-1

United States Department of Transportation  
Federal Transit Administration

## Agency/Department Information

Inspection Date	YYYY	MM	DD	Report Number	20170106-WMATA-WP-1		
	2017	01	06				
Rail Agency Name	Washington Metropolitan Area Transit Authority			Rail Agency Department	TRST	Sub- Department	
Rail Agency Department Contact Information	Name		Email		Office Phone		Mobile Phone
	[REDACTED]		[REDACTED]				
Inspection Location	A Line						

## Inspection Summary

Inspection Activity #	1	2	3	4	5	6
Activity Code	TRK-OBS-WI					
Inspection Units	1					
Inspection Subunits	1					
Defects (Number)	0					
Recommended Finding	No					
Remedial Action Required <sup>1</sup>	No					
Recommended Reinspection	No					

## Activity Summaries

Inspection Activity #	1	Inspection Subject					Observation/Quality Assessment			Activity Code		TRK	WI	OBS
Job Briefing Employee Name/Title	TRST 654					Accompanied Inspector?	Yes	Out Brief Conducted	Yes	Time	10:00-13:00	Outside Shift	No	
Related Reports						Related CAPS / Findings								
Related Rules, SOPs, Standards, or Other	Ref		Rule or SOP		Standard			Other / Title		Checklist Reference				
	TRST 1000													
	MSRPH													
Inspection Location	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	Track Type	At-grade	Tunnel	Elevated	N/A			
	X								X					
Line(s)	Red/A line		Track Number	A 2	Chain Marker and/or Station(s)		From		To					
							440+28		308+73					
Vehicles	Head Car Number		Number of Cars		Equipment		N/A							
	N/A		N/A											
Description	The FWSO inspector received a comprehensive job safety briefing from TRST 654 at the Bethesda station platform. TRST 654 accompanied the FWSO inspector as the								Number of Defects		0			
									Recommended Finding?		No			
									Remedial Action Required?		No			

<sup>1</sup> The rail transit agency must provide FTA with the necessary evidence (e.g. maintenance work order system records, photos, documentation, records, data, or other evidence) to close out the Remedial Action. Closeout of Remedial Actions may also be subject to ongoing FTA verification inspections to ensure corrections are sufficient and effective.

Inspector in Charge - Signature		Date
WINSLOW L. POWELL <small>Digitally signed by WINSLOW L. POWELL DN: cn=US, o=U.S. Government, ou=DOT Headquarters, ou=FTAHQ, cn=WINSLOW L. POWELL Date: 2017.01.10 11:35:53 -0500</small>		
Inspector in Charge - Name	Inspection Team	
Winslow Powell	Kevin McDonald	





	<p>Roadway Worker in Charge (RWIC) and verified that two Roadway Maintenance Machines (RMM), #40 and #41, would be operating on track #2 within the working limits. The Roadway Worker Protection (RWP) would be Exclusive Track Occupancy (ETO) to include Roadway Flag Persons on the RMMs with shunts and fixed red signals at each end of the working limits. The FWSO inspector verified that trains were being single tracked and that there was a concrete wall between tracks 1 and 2.</p> <p>The third rail was de-energized under a supervisory outage, and the RWIC verified that it had been tested with a hot stick and pointed out third rail gaps to the inspector. The inspector observed Warning Strobe and Alarm Devices (WSAD) connected to the third rail, and also observed WMATA workers removing direct fixation fasteners and replacing with same. WMATA workers were also repairing wall and ceiling cracks that were leaking water.</p>	<b>Recommended Reinspection?</b>	No
<b>Remedial Action</b>	N/A		

**Inspection Form**

FOIA Exemption: All (b)(6)

**Form FTA-IR-1**United States Department of Transportation  
Federal Transit Administration**Agency/Department Information**

<b>Inspection Date</b>	YYYY	MM	DD	<b>Report Number</b>	20170110-WMATA-WP-1		
	2017	01	10				
<b>Rail Agency Name</b>	Washington Metropolitan Area Transit Authority			<b>Rail Agency Department</b>	RTRA	<b>Sub- Department</b>	N/A
<b>Rail Agency Department Contact Information</b>	Name		Email		Office Phone		Mobile Phone
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
<b>Inspection Location</b>	Green Line, Greenbelt to L'Enfant Plaza						

**Inspection Summary**

<b>Inspection Activity #</b>	1	2	3	4	5	6
<b>Activity Code</b>	RTRA-RI-OBS					
<b>Inspection Units</b>	1					
<b>Inspection Subunits</b>	0					
<b>Defects (Number)</b>	1					
<b>Recommended Finding</b>	Yes					
<b>Remedial Action Required<sup>1</sup></b>	Yes					
<b>Recommended Reinspection</b>	Yes					

**Activity Summaries**

<b>Inspection Activity #</b>	1	<b>Inspection Subject</b>	Rail Compliance Observation				<b>Activity Code</b>	RTRA	RI	OBS	
<b>Job Briefing Employee Name/Title</b>	N/A		<b>Accompanied Inspector?</b>	No	<b>Out Brief Conducted</b>	No	<b>Time</b>	0900-1000	<b>Outside Shift</b>	No	
<b>Related Reports</b>	N/A		<b>Related CAPS / Findings</b>		N/A						
<b>Related Rules, SOPs, Standards, or Other</b>	Ref	Rule or SOP		Standard		Other / Title		Checklist Reference			
	MetroRail Safety Rules and Procedures Handbook, Permanent Order No. T-16-07	MSRPH General Rules 1.46-1.52 1.69-1.84 MSRPH Operating Rules 3.87 3.119, 3.120, 3.121,3.121.1, 3.79.1, 3.141 SOP# 12, 15, 16, 35, 45, 50									
<b>Inspection Location</b>	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	<b>Track Type</b>	At-grade	Tunnel	Elevated	N/A
	x		x								x
<b>Line(s)</b>	Green	<b>Track Number</b>	N/A	<b>Chain Marker and/or Station(s)</b>	From			To			
					Greenbelt			L'Enfant Plaza			

<sup>1</sup> The rail transit agency must provide FTA with the necessary evidence (e.g. maintenance work order system records, photos, documentation, records, data, or other evidence) to close out the Remedial Action. Closeout of Remedial Actions may also be subject to ongoing FTA verification inspections to ensure corrections are sufficient and effective.

<b>Inspector in Charge - Signature</b> <b>WINSLOW L. POWELL</b> <small>Digitally signed by WINSLOW L. POWELL DN: cn=US, o=U.S. Government, ou=DOT Headquarters, ou=FTAHQ, cn=WINSLOW L. POWELL Date: 2017.01.23 13:58:12 -05'00'</small>		<b>Date</b>
<b>Inspector in Charge - Name</b> Winslow Powell	<b>Inspection Team</b> Chris Difatta	



United States Department of Transportation  
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Vehicles	Head Car Number	Number of Cars	Equipment	N/A	
	6034	6			
Description	<p>The FWSO Inspector conducted a rail compliance observation of one (1) train on the Green Line between Greenbelt Station and L'Enfant Plaza and observed the following, including one defect:</p> <ul style="list-style-type: none"><li>• <u>Announcements:</u><ul style="list-style-type: none"><li>○ Made proper announcements when departing initial terminal.</li><li>○ Made proper announcements when berthed at the station.</li><li>○ Made announcement when train stopped due to another train crossing over.</li><li>○ Made proper announcements when train would arrive at terminal.</li></ul></li><li>• <u>Train Handling:</u><ul style="list-style-type: none"><li>○ Operated to 8 car station berthing marker at the end of the platform.</li><li>○ Head was out of the window when stopping an 8 car consist.</li><li>○ Application of good train handling with smooth station stops and smooth and even acceleration and deceleration.</li></ul></li><li>• <u>Train Horn Communications:</u><ul style="list-style-type: none"><li>○ Train operator did not comply with MSRP Operating Rule 3.87.1 that states, "A rail vehicle shall sound their horns when entering and exiting tunnel portals."</li></ul></li></ul>			<b>Number of Defects</b>	1
				<b>Recommended Finding?</b>	Yes
				<b>Remedial Action Required?</b>	Yes
				<b>Recommended Reinspection?</b>	Yes
				<b>Remedial Action</b>	WMATA should explore and evaluate appropriate actions for noncompliance to SOP requirements.



## Inspection Form

FOIA Exemption: All (b)(6) -

Form FTA-IR-1

United States Department of Transportation  
Federal Transit Administration

## Agency/Department Information

Inspection Date	YYYY	MM	DD	Report Number	20170110-WMATA-WP-2		
	2017	01	10				
Rail Agency Name	Washington Metropolitan Area Transit Authority			Rail Agency Department	RTRA	Sub- Department	N/A
Rail Agency Department Contact Information	Name		Email		Office Phone		Mobile Phone
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
Inspection Location	Blue Line – L'Enfant Plaza to Largo Town Center						

## Inspection Summary

Inspection Activity #	1	2	3	4	5	6
Activity Code	RTRA-RI-OBS	RTRA-RI-OBS	RTRA-RI-OBS			
Inspection Units	1	1	1			
Inspection Subunits	0	0	0			
Defects (Number)	1	0	0			
Recommended Finding	Yes	No	No			
Remedial Action Required <sup>1</sup>	No	No	No			
Recommended Reinspection	Yes	No	No			

## Activity Summaries

Inspection Activity #	1	Inspection Subject	Rail Compliance Observation				Activity Code	RTRA	RI	OBS	
Job Briefing Employee Name/Title	N/A		Accompanied Inspector?	No	Out Brief Conducted	No	Time	1000-1100	Outside Shift	No	
Related Reports	N/A		Related CAPS / Findings		N/A						
Related Rules, SOPs, Standards, or Other	Ref	Rule or SOP		Standard		Other / Title		Checklist Reference			
		MSRPH General Rules 1.46-1.52 1.69-1.84 MSRPH Operating Rules 3.87 3.119, 3.120, 3.121,3.121.1, 3.79.1, 3.141 SOP# 12, 15, 16, 35, 45, 50									
Inspection Location	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	Track Type	At-grade	Tunnel	Elevated	N/A
	x		x								x
Line(s)	Blue	Track Number	N/A	Chain Marker and/or Station(s)	From			To			
					L'Enfant Plaza			Largo Town Center			

<sup>1</sup> The rail transit agency must provide FTA with the necessary evidence (e.g. maintenance work order system records, photos, documentation, records, data, or other evidence) to close out the Remedial Action. Closeout of Remedial Actions may also be subject to ongoing FTA verification inspections to ensure corrections are sufficient and effective.

Inspector in Charge - Signature <b>WINSLOW L. POWELL</b>		Digitally signed by WINSLOW L. POWELL DN: cn=US, o=U.S. Government, ou=DOT Headquarters, ou=FTAHQ, c=US, email=WINSLOW.L.POWELL@FTA.DOT.GOV Date: 2017.01.23 14:03:17 -0500		Date
Inspector in Charge – Name Winslow Powell		Inspection Team Chris Difatta		



United States Department of Transportation  
Federal Transit Administration

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Vehicles	Head Car Number	Number of Cars	Equipment	N/A	
	3276	6			
Description	<p>An FWSO Inspector conducted a rail compliance observation of one (1) train on the Blue Line and observed the following, including one defect:</p> <ul style="list-style-type: none"> <li><u>Electronic Policy:</u> <ul style="list-style-type: none"> <li>Train operator complied with MSRPD Safety Rule 4.227 and was not observed with any form of electronic device.</li> </ul> </li> <li><u>Train Handling:</u> <ul style="list-style-type: none"> <li>Operated to 8 car station berthing marker at the end of the platform.</li> <li>Head was out of the window when stopping an 8 car consist.</li> <li>Application of good train handling with smooth station stops and smooth and even acceleration and deceleration.</li> </ul> </li> <li><u>Stations and Doors:</u> <ul style="list-style-type: none"> <li>Verified platform side of the train by sticking his/her head out of the cab window.</li> <li>Looked at doors on platform side of train to verify any activity in front of the doors for five (5) seconds before opening the doors.</li> <li>Opened the doors on the correct platform side.</li> <li>Observed train loading with head outside cab window to ensure that customers were not hit or trapped within doors.</li> <li>Closed the window and looked in the direction of travel before moving the train forward.</li> </ul> </li> <li><u>Train Horn Communication:</u> <ul style="list-style-type: none"> <li>Operator was in compliance with all procedures regarding train horn usage.</li> </ul> </li> <li><u>Announcements:</u> <ul style="list-style-type: none"> <li>Operator was not in compliance with SOP #50.5.1.1. The FWSO inspector did not observe any announcements made when leaving stations and approaching stations from L'Enfant Plaza to Largo Town Center.</li> </ul> </li> </ul>			Number of Defects	1
				Recommended Finding?	Yes
				Remedial Action Required?	No
				Recommended Reinspection?	Yes
Remedial Action	N/A				

Inspection Activity #	2	Inspection Subject	Rail Compliance Observation			Activity Code	RTRA	RI	OBS		
Job Briefing Employee Name/Title	N/A		Accompanied Inspector?	No	Out Brief Conducted	No	Time	1100-1200	Outside Shift	No	
Related Reports	N/A		Related CAPS / Findings	N/A							
Related Rules, SOPs, Standards, or Other	Ref	Rule or SOP	Standard	Other / Title	Checklist Reference						
	MetroRail Safety Rules and Procedures Handbook, Permanent Order No. T-16-07	MSRPD General Rules 1.46-1.52 1.69-1.84 MSRPD Operating Rules 3.87 3.119, 3.120, 3.121,3.121.1, 3.79.1, 3.141 SOP# 12, 15, 16, 35, 45, 50									
Inspection Location	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	Track Type	At-grade	Tunnel	Elevated	N/A



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Form FTA-IR-1

	x		x								x
<b>Line(s)</b>	Blue	<b>Track Number</b>	N/A	<b>Chain Marker and/or Station(s)</b>	From Largo Town Center		To L'Enfant Plaza				
<b>Vehicles</b>	Head Car Number 6153		Number of Cars 6		<b>Equipment</b>	N/A					
<b>Description</b>	<p>An FWSO Inspector conducted a rail compliance observation of one (1) train on the Blue Line and observed the following:</p> <ul style="list-style-type: none"> <li><u>Train Operator Fitness for Duty:</u> <ul style="list-style-type: none"> <li>Operator was in proper uniform.</li> <li>Operator did not appear to be under the influence of alcohol impaired by drugs.</li> </ul> </li> <li><u>Proper Radio Communication:</u> <ul style="list-style-type: none"> <li>Operator followed procedure and was in compliance with MSRPH General Rule 1.78 by using proper identification such as train ID, track number, and location.</li> </ul> </li> <li><u>Train Operations Through Work Zones/Passing Roadway Workers:</u> <ul style="list-style-type: none"> <li>Operator was in compliance with MSRPH Operating Rule 3.87 when encountering roadway workers in a portal between Benning and Stadium Armory.</li> </ul> </li> </ul> <p>No exceptions were taken during observations.</p>						<b>Number of Defects</b>	0			
							<b>Recommended Finding?</b>	No			
							<b>Remedial Action Required?</b>	No			
							<b>Recommended Reinspection?</b>	No			
<b>Remedial Action</b>	N/A										

<b>Inspection Activity #</b>	3	<b>Inspection Subject</b>	Rail Compliance Observation				<b>Activity Code</b>	RTRA		RI	OBS
<b>Job Briefing Employee Name/Title</b>	N/A			<b>Accompanied Inspector?</b>	No	<b>Out Brief Conducted</b>	No	<b>Time</b>	1200-1400	<b>Outside Shift</b>	No
<b>Related Reports</b>	N/A			<b>Related CAPS / Findings</b>	N/A						
<b>Related Rules, SOPs, Standards, or Other</b>	Ref		Rule or SOP		Standard		Other / Title		Checklist Reference		
	MetroRail Safety Rules and Procedures Handbook, Permanent Order No. T-16-07		MSRPH General Rules 1.46-1.52 1.69-1.84 MSRPH Operating Rules 3.87 3.119, 3.120, 3.121,3.121.1, 3.79.1, 3.141 SOP# 12, 15, 16, 35, 45, 50								
<b>Inspection Location</b>	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	<b>Track Type</b>	At-grade	Tunnel	Elevated	N/A
			x								
<b>Line(s)</b>	Blue	<b>Track Number</b>	N/A	<b>Chain Marker and/or Station(s)</b>	From L'Enfant Plaza station		To N/A				
<b>Vehicles</b>	Head Car Number N/A		Number of Cars N/A		<b>Equipment</b>	N/A					
<b>Description</b>	An FWSO inspector conducted a rail compliance observation of seven (7) trains on the Blue Line.						<b>Number of Defects</b>	0			
							<b>Recommended Finding?</b>	No			
							<b>Remedial Action Required?</b>	No			



	<p>The FWSO inspector positioned himself at the 8 car berthing mark on the station platform to observe the following:</p> <ul style="list-style-type: none"><li>• <u>Train Handling:</u><ul style="list-style-type: none"><li>○ Operated to 8 car station berthing marker at the end of the platform.</li><li>○ Head was out of the window when stopping an 8 car consist.</li><li>○ Application of good train handling with smooth station stops and smooth and even acceleration and deceleration.</li></ul></li><li>• <u>Stations and Doors:</u><ul style="list-style-type: none"><li>○ Verified platform side of the train by sticking his/her head out of the cab window.</li><li>○ Looked at doors on platform side of train to verify any activity in front of the doors for five (5) seconds before opening the doors.</li><li>○ Opened the doors on the correct platform side and made station announcements.</li><li>○ Observed train loading with head outside cab window to ensure that customers were not hit or trapped within doors.</li><li>○ Closed the window and looked in the direction of travel before moving the train forward.</li></ul></li></ul> <p>No exceptions were taken during observations.</p>		
Remedial Action	N/A	Recommended Reinspection?	No



# Inspection Form

FOIA Exemption: All (b)(6)

Form FTA-IR-1

United States Department of Transportation  
Federal Transit Administration

## Agency/Department Information

Inspection Date	YYYY	MM	DD	Report Number	20170111-WMATA-CB-1		
	2017	01	11				
Rail Agency Name	Washington Metropolitan Area Transit Authority			Rail Agency Department	TRST	Sub- Department	TKIN
Rail Agency Department Contact Information	Name			Email		Office Phone	Mobile Phone
	[REDACTED]			[REDACTED]			
	[REDACTED]			[REDACTED]			
	[REDACTED]			[REDACTED]			
	[REDACTED]			[REDACTED]			
	[REDACTED]			[REDACTED]			
Inspection Location	Between Addison Road and Capitol Heights (G Line, Tracks 1 & 2)						

## Inspection Summary

Inspection Activity #	1	2	3	4	5	6
Activity Code	TRK-JSB-OBS	TRK-WI-PI				
Inspection Units	1	2				
Inspection Subunits	0	1				
Defects (Number)	0	6				
Recommended Finding	No	Yes				
Remedial Action Required <sup>1</sup>	No	Yes				
Recommended Reinspection	No	Yes				

## Activity Summaries

Inspection Activity #	1	Inspection Subject					Job Safety Briefing			Activity Code		TRK	JSB	OBS
Job Briefing Employee Name/Title	TRST 626					Accompanied Inspector?	Yes	Out Brief Conducted	No	Time	1000-1230	Outside Shift	No	
Related Reports	N/A					Related CAPS / Findings			N/A					
Related Rules, SOPs, Standards, or Other	Ref		Rule or SOP			Standard			Other / Title		Checklist Reference			
	RWPM													
	MSRPH													
Inspection Location	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	Track Type	At-grade	Tunnel	Elevated	N/A			
	X							X	X					
Line(s)	G	Track Number	1 & 2		Chain Marker and/or Station(s)		From		To					
							469+00		424+00					
Vehicles	Head Car Number		Number of Cars			Equipment	N/A							
	N/A		N/A											
Description	TRST 626 provided a comprehensive job safety briefing. The briefing included the									Number of Defects		0		

<sup>1</sup> The rail transit agency must provide FTA with the necessary evidence (e.g. maintenance work order system records, photos, documentation, records, data, or other evidence) to close out the Remedial Action. Closeout of Remedial Actions may also be subject to ongoing FTA verification inspections to ensure corrections are sufficient and effective.

Inspector in Charge - Signature	<b>CHAD DAVID BROSKI</b>	Digitally signed by CHAD DAVID BROSKI DN: c=US, o=U.S. Government, ou=FRA FRACHicagoll, ou=DOT FRACHicagoll, cn=CHAD DAVID BROSKI Date: 2017.01.12 15:25:52 -06'00'	Date
Inspector in Charge - Name	Chad Broski		
Inspection Team	Chad Broski		





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	work limits, the protection that would be used (Train Approach Warning), hazards that would be encountered, and the required Personal Protective Equipment (PPE). TRST 626 also reviewed the Roadway Access Guide pertaining to our inspection limits. He then ensured that the work group had the required PPE and the proper RWP training. He also required the work group to acknowledge understanding of the on-track safety procedures.							<b>Recommended Finding?</b>		No	
								<b>Remedial Action Required?</b>		No	
								<b>Recommended Reinspection?</b>		No	
<b>Remedial Action</b>		N/A									

<b>Inspection Activity #</b>	2		<b>Inspection Subject</b>					General Track Observations				<b>Activity Code</b>		TRK		WI		PI			
<b>Job Briefing Employee Name/Title</b>	TRST 626					<b>Accompanied Inspector?</b>		Yes		<b>Out Brief Conducted</b>		No		<b>Time</b>		1000-1230		<b>Outside Shift</b>		No	
<b>Related Reports</b>			N/A					<b>Related CAPS / Findings</b>			N/A										
<b>Related Rules, SOPs, Standards, or Other</b>			Ref		Rule or SOP			Standard			Other / Title			Checklist Reference							
			RWPM					TRST 1000			Permanent Order No. T-16-07, Rev. 1										
			MSRPH																		
<b>Inspection Location</b>			Main Track	Yard	Station	OCC	RTA Facility	FTA Office	<b>Track Type</b>		At-grade	Tunnel	Elevated	N/A							
			X								X	X									
<b>Line(s)</b>			G	<b>Track Number</b>	1 & 2	<b>Chain Marker and/or Station(s)</b>			From			To									
									469+00			424+00									
<b>Vehicles</b>			Head Car Number		Number of Cars			<b>Equipment</b>		N/A											
			N/A		N/A																
<b>Description</b>			<p>The FWSO inspector performed general track observations between chain markers (CM) 469+00 and 424+00 on main tracks G1 &amp; G2.</p> <p>Observations:</p> <ul style="list-style-type: none"> <li>The on-track safety complied with RWPM. Train Approach Warning Protection with a designated Watchman/Lookout allowed ample time to clear for on-coming trains.</li> <li>All trains complied with Permanent Order No. T-16-07, Rev. 1.</li> <li>FWSO noted an unusual amount of water leaking through the tunnel wall cracks and pooling (not properly draining from the tunnel invert) for both main tracks (G1 &amp; G2) at CM 424+30. The standing water has directly contributed to obvious degradation of track components.</li> <li>FWSO noted rail lying in the ROW along curves at CM G1 437+00 and CM G1 430+00, which can be an unsafe tripping hazard for an evacuation.</li> <li>FWSO noted three consecutive defective direct fixation fasteners because of missing Pandrol e-Clips at CM G2 425+00.</li> <li>FWSO noted three consecutive defective direct fixation fasteners for the switch guard rail plate at CM G2 465+00 because of missing anchor bolts on the field side for the main track.</li> </ul>							<b>Number of Defects</b>		6									
										<b>Recommended Finding?</b>		Yes									
										<b>Remedial Action Required?</b>		Yes									
										<b>Recommended Reinspection?</b>		Yes									
<b>Remedial Action</b>			<ul style="list-style-type: none"> <li>WMATA must repair tunnel cracks contributing to water leakage and/or clear inlets to allow proper drainage for both main tracks (G1 &amp; G2) at CM 424+30.</li> <li>WMATA must remove the rail lying in the ROW along curves at CM G1 437+00 and CM G1 430+00.</li> <li>WMATA must replace missing Pandrol e-Clips at CM G2 425+00.</li> <li>WMATA must replace missing anchor bolts for switch guard rail plate on the field side for the main track at CM G2 465+00.</li> </ul>																		



# Inspection Form

FOIA Exemption: All (b)(6)

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**Agency/Department Information**

Inspection Date	YYYY	MM	DD	Report Number	20170111-WMATA-WP-1		
	2017	01	11				
Rail Agency Name	Washington Metropolitan Area Transit Authority			Rail Agency Department	TRST	Sub- Department	Production
Rail Agency Department Contact Information	Name		Email		Office Phone		Mobile Phone
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
Inspection Location	A Line, track 2, between Dupont Circle and Farragut North						

**Inspection Summary**

Inspection Activity #	1	2	3	4	5	6
Activity Code	TRK-RWP-OBS	TRK-GEN-INS				
Inspection Units	1	1				
Inspection Subunits	5	1				
Defects (Number)	0	6				
Recommended Finding	No	No				
Remedial Action Required <sup>1</sup>	No	Yes				
Recommended Reinspection	No	Yes				

**Activity Summaries**

Inspection Activity #	1	Inspection Subject					Roadway Worker Protection – Job Safety Briefing			Activity Code		TRK	RWP	OBS
Job Briefing Employee Name/Title	TRST 6168, RWIC TRST 6410, Watchman/Lookout					Accompanied Inspector?	Yes	Out Brief Conducted	Yes	Time	0900 1430	Outside Shift	No	
Related Reports						Related CAPS / Findings								
Related Rules, SOPs, Standards, or Other	Ref		Rule or SOP		Standard		Other / Title		Checklist Reference					
	RWPM													
Inspection Location	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	Track Type	At-grade	Tunnel	Elevated	N/A			
	X								X					
Line(s)	A Line		Track Number	2	Chain Marker and/or Station(s)		From		To					
							A-01		A-03					
Vehicles	Head Car Number		Number of Cars		Equipment		N/A							
	N/A		N/A											
Description	The job safety briefing was provided by TRST 6168 at Dupont Circle Station. The briefing was compliant with WMATA requirements. It included WMATA level 1 ID check, the type of protection in place (Train Approach Warning, or TAW), and potential hazards and hot spots. No exceptions were taken with the briefing.							Number of Defects		0				
								Recommended Finding?		No				
								Remedial Action Required?		No				
								Recommended Reinspection?		No				

<sup>1</sup> The rail transit agency must provide FTA with the necessary evidence (e.g. maintenance work order system records, photos, documentation, records, data, or other evidence) to close out the Remedial Action. Closeout of Remedial Actions may also be subject to ongoing FTA verification inspections to ensure corrections are sufficient and effective.

Inspector in Charge - Signature		Date
WINSLOW L. POWELL <small>Digitally signed by WINSLOW L. POWELL DN: cn=US, o=U.S. Government, ou=DOT Headquarters, ou=FTAHQ, cn=WINSLOW L. POWELL Date: 2017.01.23 14:39:35 -0500</small>		
Inspector in Charge – Name	Inspection Team	
Winslow Powell	Alexander Nepa	



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Remedial Action	N/A											
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Inspection Activity #	2	Inspection Subject					Track General Inspection			Activity Code		TRK	GEN	INS
Job Briefing Employee Name/Title	TRST 6168, RWIC TRST 6410 Watchman/Lookout					Accompanied Inspector?	Yes	Out Brief Conducted	Yes	Time	0900 1430	Outside Shift	No	
Related Reports						Related CAPS / Findings								
Related Rules, SOPs, Standards, or Other	Ref		Rule or SOP			Standard			Other / Title		Checklist Reference			
	TRST 1000													
Inspection Location	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	Track Type	At-grade	Tunnel	Elevated	N/A			
	X								X					
Line(s)	A Line	Track Number	2	Chain Marker and/or Station(s)			From		To					
							A-01		A-03					
Vehicles	Head Car Number		Number of Cars			Equipment	N/A							
	N/A		N/A											
Description	<p>An independent inspection of the A Line, track 2, from Dupont Circle to Farragut North Station was performed. This inspection report is independent from the WMATA 3<sup>rd</sup> party contractor assessment performed by Harsco. The FWSO inspector performed the assessment using WMATA TRST 1000, dated January 1, 2015, Revision 6. Harsco inspectors performed their assessment using a newly revised, non-distributed version of the TRST 1000. As a result, the two reports may have inconsistent findings. The following six (6) defects were observed:</p> <ul style="list-style-type: none"> <li>At CM 061+00, right rail, a sliver/chip was measured 3.16 inch deep. (TRST 1000, 5.11.11)</li> <li>At CM 057+00, two non-supporting fasteners were identified. Closest holding fastener measured 91 inches, allowing a yellow condition. (TRST 1000, 7.7)</li> <li>At CM 057+00, the 3<sup>rd</sup> rail power cable is making contact with the ground. (See photo.)</li> <li>At A-230 signal, the end cover board is missing, which presents an immediate danger to individuals working in the vicinity of the unprotected area. (TRST 1000, 13.3.15)</li> <li>At A-230 signal, left rail, there are five (5) defective, missing, and loose fasteners in a row. Distance between non-defective fasteners is 178 inches. (TRST 1000, 7.7)</li> <li>At A-230 signal switch, number five (5) switch rod is loose. (TRST 1000, 9.10)</li> </ul> <p>In addition, at A2, CM 054+00, the inspector observed a leak in the tunnel that is causing extensive corrosion to the conduit, which could chip off and make contact with third rail. (See photos.)</p>							Number of Defects		6				
								Recommended Finding?		No				
								Remedial Action Required?		Yes				
								Recommended Reinspection?		Yes				
Remedial Action	<ol style="list-style-type: none"> <li>At CM 061+00, WMATA should inspect chipped rail and assess the repair required.</li> <li>At CM 057+00 and at A-230 signal, left rail, WMATA must repair, replace, or tighten the fasteners to be compliant with WMATA standards.</li> <li>At CM 057+00, WMATA must insulate the 3<sup>rd</sup> rail power cable from making direct contact with the ground.</li> <li>At A-230 signal, WMATA must re-install the missing cover board.</li> <li>At A-230 signal switch, number five (5) switch rod, WMATA must tighten rod and clip bolts.</li> </ol>													



Photos:



Corroded and flaking off





Fastener movement marks





Third rail power cable making contact with ground





# Inspection Form

FOIA Exemption: All (b)(6)

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United States Department of Transportation  
Federal Transit Administration

## Agency/Department Information

Inspection Date	YYYY	MM	DD	Report Number	20170112-WMATA-AD-1		
	2017	01	12				
Rail Agency Name	Washington Metropolitan Area Transit Authority			Rail Agency Department	POWR	Sub- Department	INSTALL
Rail Agency Department Contact Information	Name		Email		Office Phone		Mobile Phone
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
Inspection Location	C10 – National Airport – AC Electrical Room						

## Inspection Summary

Inspection Activity #	1	2	3	4	5	6
Activity Code	TP-RM-OBS					
Inspection Units	1					
Inspection Subunits	2					
Defects (Number)	0					
Recommended Finding	No					
Remedial Action Required <sup>1</sup>	No					
Recommended Reinspection	No					

## Activity Summaries

Inspection Activity #	1	Inspection Subject					C10 – National Airport – 480V AC Electrical Room demolition of primary main breaker and transformer (one main feed of two total) by MC Dean (Electrical Contractor)			Activity Code		TP	RM	OBS
Job Briefing Employee Name/Title	N/A			Accompanied Inspector?		Yes	Out Brief Conducted		Yes	Time	0100-0430	Outside Shift	Yes	
Related Reports						Related CAPS / Findings								
Related Rules, SOPs, Standards, or Other	Ref		Rule or SOP			Standard		Other / Title		Checklist Reference				
Inspection Location	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	Track Type	At-grade	Tunnel	Elevated	N/A			
			X									X		
Line(s)	C-Line	Track Number	N/A		Chain Marker and/or Station(s)		From		To					
							C10 – National Airport – AC Room		C10 – National Airport – AC Room					
Vehicles	Head Car Number		Number of Cars		Equipment		34.5kV – 480V AC SWGR Primary Main Breaker and Transformer Demolition							
	N/A		N/A											
Description	A job safety briefing outlining any safety hazards and work to be performed was provided by MC Dean (Electrical contractor) for their own crew. The only WMATA							Number of Defects		0				
								Recommended Finding?		No				

<sup>1</sup> The rail transit agency must provide FTA with the necessary evidence (e.g. maintenance work order system records, photos, documentation, records, data, or other evidence) to close out the Remedial Action. Closeout of Remedial Actions may also be subject to ongoing FTA verification inspections to ensure corrections are sufficient and effective.

Digitally signed by AMBUR I DALEY

Inspector in Charge - Signature	AMBUR I DALEY		DN: c=US, o=U.S. Government, ou=DOT Headquarters, ou=FMCSAHQ, cn=AMBUR I DALEY Date: 2017.02.07 08:42:09 -05'00'	Date
Inspector in Charge – Name Ambur Daley	Inspection Team Tino Sahoo			



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	<p>personnel present was the Power Supervisor from K99 (West Falls Church) Yard. No issues or concerns were noted.</p> <p>MC Dean was there to demolish the primary main breaker and transformer from one of the two main utility feeds to the AC Electrical Room, in preparation to install new equipment. FWSO observed this work to ensure electrical contractors are following proper safety procedures, which includes adherence to demolition blueprints. The other utility feed's primary main breaker, transformer, secondary main breaker, and switchboard have already been replaced with the new Square D equipment.</p> <p>A temporary switchboard was used to feed the loads on the switchboard that is de-energized to allow for the installation of the new primary main breaker and transformer. The secondary main breaker and tie breaker (normally open) are already in place and ready for connection. These make up the 480V AC SWGR that will be energized by the utility feed once the primary main breaker and transformer are installed.</p> <p>The primary main breaker and transformer were hauled out of the AC Electrical Room with no problems and were going to be taken to a disposal facility by a rigging company that MC Dean had chosen.</p> <p>No issues or concerns were noted.</p>	<b>Remedial Action Required?</b>	No
		<b>Recommended Reinspection?</b>	No
<b>Remedial Action</b>	N/A		





# Inspection Form

FOIA Exemption: All (b)(6)

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United States Department of Transportation  
Federal Transit Administration

## Agency/Department Information

Inspection Date	YYYY	MM	DD	Report Number	20170112-WMATA-AD-2		
	2017	01	12				
Rail Agency Name	Washington Metropolitan Area Transit Authority			Rail Agency Department	POWR	Sub- Department	PMI
Rail Agency Department Contact Information	Name		Email		Office Phone		Mobile Phone
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
Inspection Location	CTF – Carmen Turner Facility – Main UPS Battery Room						

## Inspection Summary

Inspection Activity #	1	2	3	4	5	6
Activity Code	TP-RM-OBS					
Inspection Units	1					
Inspection Subunits	4					
Defects (Number)	0					
Recommended Finding	No					
Remedial Action Required <sup>1</sup>	Yes					
Recommended Reinspection	No					

## Activity Summaries

Inspection Activity #	1	Inspection Subject	CTF – Main UPS Battery Room – Bi-Annual Preventive Maintenance Inspection on Battery Banks (Rectangle Lead-Selenium OPzS (BAE))				Activity Code	TP	RM	OBS	
Job Briefing Employee Name/Title	WMATA Electrical Crew Supervisor WMATA Electrician #1 WMATA Electrician #2		Accompanied Inspector?	Yes	Out Brief Conducted	Yes	Time	1500-1800	Outside Shift	No	
Related Reports			Related CAPS / Findings								
Related Rules, SOPs, Standards, or Other	Ref	Rule or SOP		Standard		Other / Title		Checklist Reference			
	WMATA Preventive Maintenance Inspection for Bi-Annual Battery Maintenance; Effective June 1, 2012 (Engineering has not officially approved this PMI)										
Inspection Location	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	Track Type	At-grade	Tunnel	Elevated	N/A
				X							X
Line(s)	N/A	Track Number	N/A	Chain Marker and/or Station(s)	From			To			
					CTF – Carmen Turner Facility			CTF – Carmen Turner Facility			

<sup>1</sup> The rail transit agency must provide FTA with the necessary evidence (e.g. maintenance work order system records, photos, documentation, records, data, or other evidence) to close out the Remedial Action. Closeout of Remedial Actions may also be subject to ongoing FTA verification inspections to ensure corrections are sufficient and effective.

Inspector in Charge - Signature	<b>AMBUR I DALEY</b> Digitally signed by AMBUR I DALEY DN: c=US, o=U.S. Government, ou=DOT Headquarters, ou=FMCSAHQ, cn=AMBUR I DALEY Date: 2017.02.06 11:04:38 -05'00'	Date
Inspector in Charge – Name Ambur Daley	Inspection Team Tino Sahoo	



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Vehicles	Head Car Number	Number of Cars	Equipment		
	N/A	N/A			
Description	<p>The Job Safety Briefing was comprehensive. The potential for burn, electrical shock, and explosion hazard when working with batteries was clearly articulated. No exception was taken to the Job Safety briefing.</p> <p>Battery Maintenance was done by the crew on 4 battery banks (Figure 3 and 4). Each battery bank had 144 Rectangle Lead-Selenium OPzS manufactured by BAE. These gel based batteries are connected in series per each bank, which allows the voltage per battery to be additive (144 batteries each at ~2.23V x 144 batteries = 321.12V per bank). Battery bank, or string 1 and 1A, are connected in parallel and 2 and 2A are also connected in parallel. Bank 1 and 1A are connected to uninterruptible power supply 1, or UPS 1 (Figure 8), and 2 and 2A are connected to UPS 2 (Figure 9). If the utility feeds were to go down, the UPS would supply energization to the Rail Operations Control Center and Maintenance Operations Center (Figure 7).</p> <p>The FWSO inspector examined the Preventative Maintenance Inspection (PMI) for the gel based batteries and noted that WMATA has not officially approved this PMI for use. Currently, there is only an officially approved PMI for the Valve Regulated Lead Acid (VRLA) batteries.</p> <p>The following procedures were done for the bi-annual maintenance general inspection of these gel based batteries:</p> <ol style="list-style-type: none"><li>1) Re-torque all battery bolts and hardware to 195 inch-pounds</li><li>2) Float voltage for the battery bank on cells number 1 and 60. Float voltage should be 133.8 VDC, adjust as necessary.</li><li>3) Equalize voltage for the battery bank on cell numbers 1 and 60. Equalize voltage should be 142.0 VDC, adjust as necessary.</li><li>4) Using a cellcorder, or other approved equivalent device, take voltage readings of each cell. Take internal resistance readings of each cell. Take inter-cell resistance readings of each cell. A cellcorder takes voltage, intercell resistance, and internal resistance readings of each cell in the battery bank. If all connections are within acceptable range (less than 50 micro-ohms), procedure is complete. If all connections are not within acceptable range, repeat procedure. NOTE: all wire jumpers will have a higher connection resistance than intercell connectors. (Figure 5 and 6)</li><li>5) Take specific gravity readings on six (6) cells using a clean hydrometer. Record readings on data sheet. Normal readings should be 1.240 +/- 0.01 at 77°F (25°C). If the specific gravity is low on 25% of cells, then the battery bank needs an equalize charge.</li><li>6) Charger output current.</li><li>7) Electrolyte levels – If more than half the cells in the bank are half way between the fluid level lines or lower open FSR ticket and notify Battery Crew. <b>Use only new or unopened bottles of water.</b></li><li>8) Any evidence of corrosion on posts, intercell connectors, or racks. If any corrosion is found, scrape off visible corrosion and neutralize remaining corrosion with baking soda solution. Clean area and apply approved battery grease. Extensive corrosion to the posts of the batteries is to be corrected using a Battery Breakdown Maintenance Procedure (Appendix A) on a FSR.</li><li>9) Ambient temperature of room.</li><li>10) Exhaust fan working. If not working open FSR ticket.</li></ol>	<b>Number of Defects</b>	0		
		<b>Recommended Finding?</b>	No		
		<b>Remedial Action Required?</b>	Yes		
	<b>Recommended Reinspection?</b>			No	



	<ol style="list-style-type: none"><li>11) Electrolyte temperature of pilot cell.</li><li>12) Unintentional battery grounds on either polarity. Measure positive voltage to ground and negative voltage to ground. Any ground fault condition (more than 100 volts) of the positive or negative should be noted and reported to your Supervisor.</li><li>13) Broken flame arrestors or missing flame arrestor tops. Replace any found.</li><li>14) Using a flashlight, check Individual cells for the presence of crystals (sulfation). If lead sulfate crystals appear on all cells in a string, check the following as possible causes for the abnormal condition:</li><li>15) Charger voltage: the appearance of lead sulfite crystals may indicate a low battery plant float voltage. Check the battery float voltage setting and make proper adjustment.</li><li>16) Bank discharge: a battery discharge resulting from a power failure or other reasons may produce lead sulfite crystals on the cells. This is normal with all lead acid cells since sulfate is the material produced when a lead acid cell is discharged. If the cause of the lead sulfate crystals is a recent discharge, the crystals will disappear when the cells have been fully recharged on float (usually within two weeks).</li><li>17) Clean off all dust, dirt and debris from tops of cells, flame arrestors and racks with clean cotton rag dampened with clean distilled water.</li><li>18) Check for cracked or leaking cells in the battery bank. Clean spill with baking soda and distilled water solution, open FSR ticket and notify Battery Crew.</li><li>19) Take reading of AC Ripple mV rms. Place meter to AV voltage in auto range if available and record the AC ripple in milli-volts. This measurement should be within the acceptable level shown on the battery charger or UPS nameplate.</li><li>20) Take reading of DC current running through battery bank. Using an amp-meter, clamp around the wire jumpers in the middle of the battery bank. Record the DC current.</li></ol> <p>The crew followed procedures as stated in PMI, and no issues or concerns were noted.</p>		
Remedial Action	WMATA engineering should officially approve the Preventative Maintenance Plan (PMI) for gel based batteries (BAE Rectangle Lead-Selenium OPzS).		



FIGURE 1 – CIRCUIT BREAKERS FOR BATTERY BANK OR STRING 1 AND 1A



FIGURE 2 – CIRCUIT BREAKERS FOR BATTERY BANK OR STRING 2 AND 2A



FIGURE 3 – 1 OF 4 BATTERY BANKS (144 BATTERIES PER BANK CONNECTED IN SERIES)

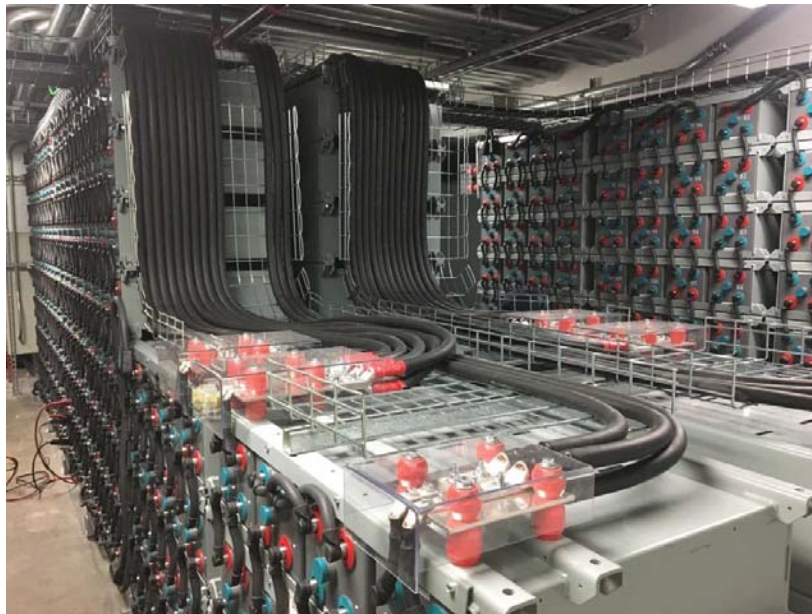


FIGURE 4 – 3 OF 4 BATTERY BANKS (144 BATTERIES PER BANK CONNECTED IN SERIES)





FIGURE 5 – CELLCORDER BEING USED TO TEST EACH INDIVIDUAL BATTERY'S VOLTAGE AND INTERNAL RESISTANCE



FIGURE 6 – CELLCORDER DEVICE



FIGURE 7 – UPS SCHEMA – UPS-1 AND UPS-2 CONNECTED IN PARALLEL



FIGURE 8 – UPS-1



FIGURE 9 – UPS-2





# Inspection Form

FOIA Exemption: All (b)(6)

Form FTA-IR-1

United States Department of Transportation  
Federal Transit Administration

## Agency/Department Information

Inspection Date	YYYY	MM	DD	Report Number	20170112-WMATA-CB-1		
	2017	01	12				
Rail Agency Name	Washington Metropolitan Area Transit Authority			Rail Agency Department	TRST	Sub- Department	TKIN
Rail Agency Department Contact Information	Name			Email		Office Phone	Mobile Phone
	[REDACTED]			[REDACTED]			
	[REDACTED]			[REDACTED]			
	[REDACTED]			[REDACTED]			
	[REDACTED]			[REDACTED]			
	[REDACTED]			[REDACTED]			
Inspection Location	Between Addison Road and Morgan Blvd (G Line, Tracks 1 & 2)						

## Inspection Summary

Inspection Activity #	1	2	3	4	5	6
Activity Code	TRK-JSB-OBS	TRK-WI-PI				
Inspection Units	1	2				
Inspection Subunits	0	1				
Defects (Number)	0	4				
Recommended Finding	No	Yes				
Remedial Action Required <sup>1</sup>	No	Yes				
Recommended Reinspection	No	Yes				

## Activity Summaries

Inspection Activity #	1	Inspection Subject					Job Safety Briefing			Activity Code		TRK	JSB	OBS
Job Briefing Employee Name/Title	TRST 626					Accompanied Inspector?	Yes	Out Brief Conducted	No	Time	1000-1300	Outside Shift	No	
Related Reports	N/A					Related CAPS / Findings			N/A					
Related Rules, SOPs, Standards, or Other	Ref		Rule or SOP			Standard			Other / Title		Checklist Reference			
	RWPM													
	MSRPH													
Inspection Location	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	Track Type	At-grade	Tunnel	Elevated	N/A			
	X							X	X	X				
Line(s)	G	Track Number	1 & 2		Chain Marker and/or Station(s)		From		To					
							476+00		550+00					
Vehicles	Head Car Number		Number of Cars			Equipment	N/A							
	N/A		N/A											
Description	TRST 626 provided a comprehensive job safety briefing. The briefing included the									Number of Defects		0		

<sup>1</sup> The rail transit agency must provide FTA with the necessary evidence (e.g. maintenance work order system records, photos, documentation, records, data, or other evidence) to close out the Remedial Action. Closeout of Remedial Actions may also be subject to ongoing FTA verification inspections to ensure corrections are sufficient and effective.

Inspector in Charge - Signature	<b>CHAD DAVID BROSKI</b>	Digitally signed by CHAD DAVID BROSKI DN: c=US, o=U.S. Government, ou=FRA FRACHicagoLL, ou=DOT FRACHicagoLL, cn=CHAD DAVID BROSKI Date: 2017.01.13 15:36:15 -06'00'	Date
Inspector in Charge - Name	Chad Broski		
Inspection Team	Chad Broski		

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	work limits, the protection that would be used (Train Approach Warning), hazards that would be encountered, and the required Personal Protective Equipment (PPE). TRST 626 also reviewed the Roadway Access Guide pertaining to our inspection limits. He then inspected the work group to ensure they had the necessary PPE and Roadway Worker Protection (RWP) training. He also required the work group to acknowledge understanding of the on-track safety procedures.							<b>Recommended Finding?</b>		No	
								<b>Remedial Action Required?</b>		No	
								<b>Recommended Reinspection?</b>		No	
<b>Remedial Action</b>		N/A									

<b>Inspection Activity #</b>	2		<b>Inspection Subject</b>					General Track Observations				<b>Activity Code</b>		TRK	WI	PI	
<b>Job Briefing Employee Name/Title</b>	TRST 626					<b>Accompanied Inspector?</b>		Yes		<b>Out Brief Conducted</b>		No		<b>Time</b>	1000-1300	<b>Outside Shift</b>	No
<b>Related Reports</b>			N/A					<b>Related CAPS / Findings</b>			N/A						
<b>Related Rules, SOPs, Standards, or Other</b>	Ref		Rule or SOP			Standard			Other / Title			Checklist Reference					
	RWPM					TRST 1000			Permanent Order No. T-16-07, Rev. 1								
	MSRPH																
<b>Inspection Location</b>	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	<b>Track Type</b>		At-grade	Tunnel	Elevated	N/A					
	X								X	X	X						
<b>Line(s)</b>	G	<b>Track Number</b>	1 & 2		<b>Chain Marker and/or Station(s)</b>		From			To							
			476+00				550+00										
<b>Vehicles</b>	Head Car Number		Number of Cars			<b>Equipment</b>		N/A									
	N/A		N/A														
<b>Description</b>	<p>The FWSO inspector performed general track observations between chain markers (CM) 476+00 and 550+00 on main tracks G1 &amp; G2.</p> <p>Observations:</p> <ul style="list-style-type: none"> <li>The on-track safety complied with the RWPM. Train Approach Warning Protection with a designated Watchman/Lookout allowed ample time to clear for on-coming trains.</li> <li>All trains complied with Permanent Order No. T-16-07, Rev. 1.</li> <li>FWSO noted numerous grout pads cracked throughout the aerial structure at CM G2 476+00. Grout pads had been previously marked for repair, and repairs had already begun on the opposite track (main track 1) for the same condition.</li> <li>FWSO noted missing 3<sup>rd</sup> rail cover boards at CM G1 548+00 and G1 490+00.</li> <li>FWSO noted plug rail lying in the ROW at CM G1 490+00, which can be an unsafe tripping hazard for an evacuation.</li> </ul>							<b>Number of Defects</b>		4							
								<b>Recommended Finding?</b>		Yes							
								<b>Remedial Action Required?</b>		Yes							
								<b>Recommended Reinspection?</b>		Yes							
<b>Remedial Action</b>		<ul style="list-style-type: none"> <li>WMATA must repair the failing grout pads on the aerial structure at CM G2 476+00.</li> <li>WMATA must replace the missing 3<sup>rd</sup> rail cover boards at CM G1 548+00 and G1 490+00.</li> <li>WMATA must remove the plug rail lying in the ROW at CM G1 490+00.</li> </ul>															

**Inspection Form**

FOIA Exemption: All (b)(6)

**Form FTA-IR-1**United States Department of Transportation  
Federal Transit Administration**Agency/Department Information**

<b>Inspection Date</b>	YYYY	MM	DD	<b>Report Number</b>	20170112-WMATA-WP-1		
	2017	01	12				
<b>Rail Agency Name</b>	Washington Metropolitan Area Transit Authority			<b>Rail Agency Department</b>	TRST	<b>Sub- Department</b>	Production
<b>Rail Agency Department Contact Information</b>	<b>Name</b>		<b>Email</b>		<b>Office Phone</b>		<b>Mobile Phone</b>
	[REDACTED]		[REDACTED]				
	[REDACTED]		[REDACTED]				
	[REDACTED]		[REDACTED]				
<b>Inspection Location</b>	A Line, Farragut North Station						

**Inspection Summary**

<b>Inspection Activity #</b>	1	2	3	4	5	6
<b>Activity Code</b>	TRK-RWP-OBS	TRK-GEN-INS				
<b>Inspection Units</b>	1	0				
<b>Inspection Subunits</b>	5	0				
<b>Defects (Number)</b>	0	0				
<b>Recommended Finding</b>	No	No				
<b>Remedial Action Required<sup>1</sup></b>	No	No				
<b>Recommended Reinspection</b>	No	No				

**Activity Summaries**

<b>Inspection Activity #</b>	1	<b>Inspection Subject</b>					Roadway Worker Protection – Job Safety Briefing		<b>Activity Code</b>		TRK	RWP	OBS
<b>Job Briefing Employee Name/Title</b>	TRST UNIT 6168, RWIC TRST UNIT 6159, Watchman/Lookout					<b>Accompanied Inspector?</b>	Yes	<b>Out Brief Conducted</b>	Yes	<b>Time</b>	0930 1330	<b>Outside Shift</b>	No
<b>Related Reports</b>						<b>Related CAPS / Findings</b>							
<b>Related Rules, SOPs, Standards, or Other</b>	Ref		Rule or SOP		Standard		Other / Title		Checklist Reference				
	RWPM												
<b>Inspection Location</b>	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	<b>Track Type</b>	At-grade	Tunnel	Elevated	N/A		
	X								X				
<b>Line(s)</b>	A Line	<b>Track Number</b>	2	<b>Chain Marker and/or Station(s)</b>		From		To					
						A-01		A-00					
<b>Vehicles</b>	<b>Head Car Number</b>		<b>Number of Cars</b>		<b>Equipment</b>		N/A						
	N/A		N/A										
<b>Description</b>	The Job Safety Briefing was provided by TRST Unit 6168 at Farragut North Station. The briefing was compliant with WMATA requirements. It included WMATA level 1							<b>Number of Defects</b>		0			
								<b>Recommended Finding?</b>		No			
								<b>Remedial Action Required?</b>		No			

<sup>1</sup> The rail transit agency must provide FTA with the necessary evidence (e.g. maintenance work order system records, photos, documentation, records, data, or other evidence) to close out the Remedial Action. Closeout of Remedial Actions may also be subject to ongoing FTA verification inspections to ensure corrections are sufficient and effective.

<b>Inspector in Charge - Signature</b> <b>WINSLOW L. POWELL</b> <small>Digitally signed by WINSLOW L. POWELL DN: cn=US, o=U.S. Government, ou=DOT Headquarters, ou=FTAHQ, cn=WINSLOW L. POWELL Date: 2017.01.23 13:33:27 -05'00'</small>		<b>Date</b>
<b>Inspector in Charge – Name</b> Winslow Powell	<b>Inspection Team</b> Alexander Nepa	

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	ID check, the type of protection in place (Train Approach Warning, or TAW), and potential hazards and hot spots. No exceptions were taken with the briefing.	Recommended Reinspection?	No
Remedial Action	N/A		

Inspection Activity #	2	Inspection Subject	Track General Inspection					Activity Code	TRK	GEN	INS						
Job Briefing Employee Name/Title	TRST Unit 6168, RWIC TRST Unit 6410, Watchman/Lookout.			Accompanied Inspector?	Yes	Out Brief Conducted	Yes	Time	0930 1330	Outside Shift	No						
Related Reports				Related CAPS / Findings													
Related Rules, SOPs, Standards, or Other	Ref	Rule or SOP			Standard		Other / Title		Checklist Reference								
	TRST 1000																
Inspection Location	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	Track Type	At-grade	Tunnel	Elevated	N/A						
	X								X								
Line(s)	A Line	Track Number	2	Chain Marker and/or Station(s)		From			To								
						A-01			A-01								
Vehicles	Head Car Number		Number of Cars		Equipment	N/A											
	N/A		N/A														
Description	An independent inspection was scheduled of the A Line, track 2, from Farragut North Station to Metro Center. The FWSO inspector, WMATA personnel, and a 3 <sup>rd</sup> party contractor representative from Harsco were present. At 1000 hours, the Roadway Worker in Charge (RWIC) contacted the Rail Operations Control Center (ROCC) to obtain track access. Due to single tracking and equipment failure on the A Line, access was denied until 1145 hours.  A WMATA representative from Track Access Support Services (TASS) contacted the RWIC and informed him that the FWSO inspector was not listed on their work sheet, so he could not accompany the work group. Phone calls were made in an attempt to resolve the issue, and at 1245 hours the issue was resolved. At that time, the RWIC contacted ROCC to request permission to access the track, but permission was denied due to train traffic. At 1315 the inspection was called off due to insufficient time, and the inspection will be rescheduled.							Recommended Finding?		No							
										Remedial Action Required?		No					
								Recommended Reinspection?				No					
Remedial Action	N/A																



# Inspection Form

FOIA Exemption: All (b)(6)

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## Agency/Department Information

Inspection Date	YYYY	MM	DD	Report Number	20170118-WMATA-AD-1		
	2017	01	18				
Rail Agency Name	Washington Metropolitan Area Transit Authority			Rail Agency Department	POWR	Sub- Department	CBL. IN.
Rail Agency Department Contact Information	Name		Email		Office Phone		Mobile Phone
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
Inspection Location							

## Inspection Summary

Inspection Activity #	1	2	3	4	5	6
Activity Code	TP-WI-OBS					
Inspection Units	1					
Inspection Subunits	19					
Defects (Number)	9					
Recommended Finding	Yes					
Remedial Action Required <sup>1</sup>	Yes					
Recommended Reinspection	Yes					

## Activity Summaries

Inspection Activity #	1	Inspection Subject					Walking Observation			Activity Code		TP	WI	OBS
Job Briefing Employee Name/Title	WMATA RWIC WMATA Watchman/Lookout WMATA Documenter					Accompanied Inspector?	Yes	Out Brief Conducted	Yes	Time	1000-1400	Outside Shift	No	
Related Reports						Related CAPS / Findings								
Related Rules, SOPs, Standards, or Other	Ref		Rule or SOP			Standard		Other / Title		Checklist Reference				
	RWPM													
Inspection Location	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	Track Type	At-grade	Tunnel	Elevated	N/A			
	X								X					
Line(s)	D-Line	Track Number	TRK 1 & TRK 2		Chain Marker and/or Station(s)	From		To						
	A-Line					D03 – L'Enfant Plaza to A01 – Metro Center Track 1		A01 – Metro Center to D04 – Federal Center SW Track 2						
Vehicles	Head Car Number		Number of Cars		Equipment	N/A								
	N/A		N/A											
Description	The Job Safety Briefing was comprehensive. The hot spots, hazards, clearance areas, communication, and Roadway Access Guide were used as part of the discussion. No exception was taken to the Job Safety Briefing.								Number of Defects		9			
									Recommended Finding?		Yes			
									Remedial Action Required?		Yes			

<sup>1</sup> The rail transit agency must provide FTA with the necessary evidence (e.g. maintenance work order system records, photos, documentation, records, data, or other evidence) to close out the Remedial Action. Closeout of Remedial Actions may also be subject to ongoing FTA verification inspections to ensure corrections are sufficient and effective.

Inspector in Charge - Signature	AMBUR I DALEY		Digitally signed by AMBUR I DALEY DN: c=US, o=U.S. Government, ou=DOT Headquarters, ou=FMCSAHQ, cn=AMBUR I DALEY Date: 2017.02.06 09:57:57 -05'00'	Date
Inspector in Charge – Name Ambur Daley	Inspection Team Tino Sahoo			



	<p>Daily cable inspections are part of the holistic approach WMATA has instituted to prevent cable fires and arcing incidents. On a typical day there are three different WMATA cable inspection crews that are active, and they include three personnel—the Roadway Worker in Charge (RWIC), the Watchman/Lookout, and a documenter of issues in wayside power cable and/or connections. Each crew inspects a different portion of the mainline from 1000–1400 hours. The pictures taken and issues noted are entered into a database that creates Maximo work orders.</p> <p>As outlined below, the following issues with the power cables were noted by the FWSO inspector and WMATA personnel during the course of the normal daily cable inspection process.</p> <ul style="list-style-type: none"><li>• TRK 1 CM 045+00 – 3<sup>rd</sup> Rail cover board needs to be replaced (Figure 1)</li><li>• TRK 1 CM 042+00 – Debris by feeder cables (Figure 2)</li><li>• TRK 1 D02 – Smithsonian Platform – Expansion cables on deck, debris surrounding expansion cables, cables are degraded and should be replaced (Figure 3)</li><li>• TRK 1 CM 026+00 – Trash surrounding feeder cables (Figure 4)</li><li>• TRK 1 CM 025+00 – Trash surrounding jumper cables that are replacing normal feeder cables due to a tie breaker rehab. Trash by 3<sup>rd</sup> rail end approach (Figure 5)</li><li>• TRK 1 CM 024+00 – 3<sup>rd</sup> rail cover board missing and trash by 3<sup>rd</sup> rail end approach. 3<sup>rd</sup> rail end approach corroded and needs to be replaced. (Figure 6)</li><li>• TRK 1 CM 022+00 – Water intrusion in tunnel and leaking on 3<sup>rd</sup> Rail (Figure 7)</li><li>• TRK 1 CM 008+00 – 3<sup>rd</sup> rail post insulator needs replacement (Figure 8)</li><li>• TRK 1 CM 007+00 – Debris surrounding feeder cables; feeder cable orange boot in contact with metal tunnel structure (Figure 9)</li><li>• TRK 1 CM 005+00 – Water intrusion in tunnel leaking on safety catwalk (Figure 10)</li><li>• TRK 2 CM 020+50 – Water intrusion in tunnel (Figure 11)</li><li>• TRK 2 CM 024+00 – Debris surrounding feeder cables (Figure 12)</li><li>• TRK 2 CM 025+00 – Debris surrounding feeder cables. 3<sup>rd</sup> rail end approach should be replaced. (Figure 13 &amp; 14)</li><li>• TRK 2 D02 – Smithsonian Platform – Expansion cables on deck and debris surrounding expansion cables</li><li>• TRK 2 CM 043+00 – Debris surrounding feeder cables (Figure 15)</li><li>• TRK 2 CM 045+00 – 3<sup>rd</sup> rail end approach needs replacement (Figure 16)</li><li>• TRK 2 CM 054+00 – Trash and water in tunnel area by 3<sup>rd</sup> rail (Figure 17)</li><li>• TRK 2 CM 067+00 – Water Intrusion in tunnel, leaking from ceiling (Figure 18)</li><li>• TRK 2 CM 068+00 – Trash in drain needs to be cleaned out and 3<sup>rd</sup> rail cover board missing (Figure 19)</li></ul> <p>General observations: Water intrusion should be mitigated, especially in tunnel areas, to minimize the ability of contaminants to track up 3<sup>rd</sup> rail insulators, which causes arcing incidents. Any and all preventive/corrective measures should be taken to prevent intrusion of water and moisture into stub-ups, boots, and cables.</p>	<b>Recommended Reinspection?</b>	Yes
<b>Remedial Action</b>	<ul style="list-style-type: none"><li>• At D02, TRK 1, Smithsonian Platform, the degraded cables must be replaced and elevated off the deck.</li><li>• At CM 024+00, TRK 1, the corroded 3<sup>rd</sup> rail end approach must be replaced.</li><li>• At CM 022+00, TRK 1, WMATA must fix the tunnel leak that is causing water to leak onto the 3<sup>rd</sup> Rail.</li><li>• At CM 008+00, TRK 1, the 3<sup>rd</sup> rail post insulator must be replaced.</li><li>• At CM 005+00, TRK 1, WMATA must repair the leak causing water to intrude onto safety catwalk.</li><li>• At CM 020+50, TRK 2, WMATA must repair the leak causing water to intrude into tunnel.</li><li>• At CM 025+00, TRK 2, the 3<sup>rd</sup> rail end approach must be replaced.</li><li>• At D02, TRK 2, Smithsonian Platform, expansion cables must be elevated.</li><li>• At CM 045+00, TRK 2, the 3<sup>rd</sup> rail end approach must be replaced.</li></ul>		



## Inspection Form

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Photos:



FIGURE 1 - TRK 1 CM 045+00 – 3<sup>RD</sup> RAIL COVERBOARD NEEDS TO BE REPLACED



FIGURE 2 – TRK 1 CM 042+00 DEBRIS BY FEEDER CABLES

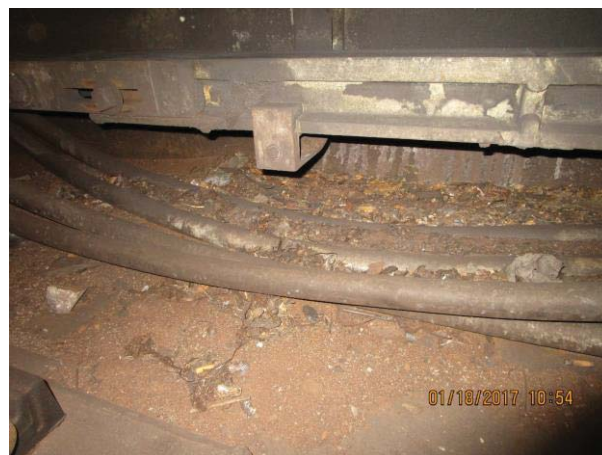


FIGURE 3 - TRK 1 D02 – SMITHSONIAN PLATFORM – EXPANSION CABLES ON DECK, DEBRIS SURROUNDING EXPANSION CABLES, CABLES ARE DEGRADED AND SHOULD BE REPLACED





FIGURE 4 - TRK 1 CM 026+00 – TRASH SURROUNDING FEEDER CABLES



FIGURE 5 - TRK 1 CM 025+00 – TRASH SURROUNDING JUMPER CABLES THAT ARE REPLACING NORMAL FEEDER CABLES DUE TO A TIE BREAKER REHAB. TRASH BY 3<sup>RD</sup> RAIL END APPROACH



FIGURE 6 - TRK 1 CM 024+00 – 3<sup>RD</sup> RAIL COVERBOARD MISSING AND TRASH BY 3<sup>RD</sup> RAIL END APPROACH. 3<sup>RD</sup> RAIL END APPROACH CORRODED AND NEEDS TO BE REPLACED





FIGURE 7 - TRK 1 CM 022+00 – WATER INTRUSION IN TUNNEL AND LEAKING ON 3<sup>RD</sup> RAIL



FIGURE 8 - TRK 1 CM 008+00 – 3<sup>RD</sup> RAIL POST INSULATOR NEEDS REPLACEMENT



FIGURE 9 - TRK 1 CM 007+00 – DEBRIS SURROUNDING FEEDER CABLES; FEEDER CABLE ORANGE BOOT IN CONTACT WITH METAL TUNNEL STRUCTURE



FIGURE 10 - TRK 1 CM 005+00 – WATER INTRUSION IN TUNNEL LEAKING ON SAFETY CATWALK



FIGURE 11 - TRK 2 CM 020+50 – WATER INTRUSION IN TUNNEL



FIGURE 12 - TRK 2 CM 024+00 – DEBRIS SURROUNDING FEEDER CABLES



FIGURE 13 - TRK 2 CM 025+00 – DEBRIS SURROUNDING FEEDER CABLES.



FIGURE 14 - TRK 2 CM 025+00 - 3<sup>RD</sup> RAIL END APPROACH SHOULD BE REPLACED.





FIGURE 15 - TRK 2 CM 043+00 – DEBRIS SURROUNDING FEEDER CABLES



FIGURE 16 - TRK 2 CM 045+00 – 3<sup>RD</sup> RAIL END APPROACH NEEDS REPLACEMENT



FIGURE 17 - TRK 2 CM 054+00 – TRASH AND WATER IN TUNNEL AREA BY 3<sup>RD</sup> RAIL



FIGURE 18 - TRK 2 CM 067+00 – WATER INTRUSION IN TUNNEL, LEAKING FROM CEILING



FIGURE 19 - TRK 2 CM 068+00 – TRASH IN DRAIN NEEDS TO BE CLEANED OUT AND 3<sup>RD</sup> RAIL COVERBOARD MISSING



# Inspection Form

FOIA Exemption: All (b)(6)

Form FTA-IR-1

United States Department of Transportation  
Federal Transit Administration

## Agency/Department Information

Inspection Date	YYYY	MM	DD	Report Number	20170118-WMATA-CB-1		
	2017	01	18				
Rail Agency Name	Washington Metropolitan Area Transit Authority			Rail Agency Department	TRST	Sub- Department	TKIN
Rail Agency Department Contact Information	Name			Email		Office Phone	
	[REDACTED]			[REDACTED]		[REDACTED]	
	[REDACTED]			[REDACTED]		[REDACTED]	
	[REDACTED]			[REDACTED]		[REDACTED]	
	[REDACTED]			[REDACTED]		[REDACTED]	
	[REDACTED]			[REDACTED]		[REDACTED]	
Inspection Location	Yellow/Blue Line at National Airport						

## Inspection Summary

Inspection Activity #	1	2	3	4	5	6
Activity Code	TRK-JSB-OBS	TRK-WI-PI				
Inspection Units	1	2				
Inspection Subunits	0	1				
Defects (Number)	0	2				
Recommended Finding	No	No				
Remedial Action Required <sup>1</sup>	No	Yes				
Recommended Reinspection	No	Yes				

## Activity Summaries

Inspection Activity #	1	Inspection Subject					Job Safety Briefing			Activity Code		TRK	JSB	OBS
Job Briefing Employee Name/Title	TRST 626					Accompanied Inspector?	Yes	Out Brief Conducted	No	Time	1000-1200	Outside Shift	No	
Related Reports	N/A					Related CAPS / Findings			No					
Related Rules, SOPs, Standards, or Other	Ref		Rule or SOP			Standard			Other / Title		Checklist Reference			
	RWPM													
	MSRPH													
Inspection Location	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	Track Type	At-grade	Tunnel	Elevated	N/A			
	X									X				
Line(s)	C	Track Number	1 & 2		Chain Marker and/or Station(s)		From		To					
							369+00		385+00					
Vehicles	Head Car Number		Number of Cars			Equipment	N/A							
	N/A		N/A											
Description	TRST 626 provided a comprehensive job safety briefing. The briefing included the									Number of Defects		0		

<sup>1</sup> The rail transit agency must provide FTA with the necessary evidence (e.g. maintenance work order system records, photos, documentation, records, data, or other evidence) to close out the Remedial Action. Closeout of Remedial Actions may also be subject to ongoing FTA verification inspections to ensure corrections are sufficient and effective.

Inspector in Charge - Signature	<b>CHAD DAVID BROSKI</b> <small>Digitally signed by CHAD DAVID BROSKI DN: c=US, o=U.S. Government, ou=FRA FRACicagoll, ou=DOT FRACicagoll, cn=CHAD DAVID BROSKI Date: 2017.01.24 09:27:25 -06'00'</small>	Date
Inspector in Charge - Name Chad Broski	Inspection Team Chad Broski	



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	work limits, the protection that would be used (Train Approach Warning with an Advanced Watchman/Lookout), hazards that would be encountered, and the required Personal Protective Equipment (PPE). TRST 626 also reviewed the Roadway Access Guide pertaining to the inspection limits. He then inspected the work group to ensure they had the necessary PPE and Roadway Worker Protection (RWP) training. He also required the work group to acknowledge understanding of the on-track safety procedures.							Recommended Finding?		No
								Remedial Action Required?		No
								Recommended Reinspection?		No
Remedial Action		N/A								

Inspection Activity #	2	Inspection Subject	Remedial Action Verification					Activity Code		TRK	WI	PI
Job Briefing Employee Name/Title	TRST 626		Accompanied Inspector?	Yes	Out Brief Conducted	No	Time	1000-1200	Outside Shift	No		
Related Reports	20160709-WMATA-WA-1 20160716-WMATA-RPM-1 20161020-WMATA-CF-1		Related CAPS / Findings			No						
Related Rules, SOPs, Standards, or Other	Ref		Rule or SOP		Standard		Other / Title		Checklist Reference			
	RWPM				TRST 1000		Permanent Order No. T-16-07, Rev. 1					
	MSRPH											
Inspection Location	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	Track Type	At-grade	Tunnel	Elevated	N/A	
	X									X		
Line(s)	C	Track Number	1 & 2	Chain Marker and/or Station(s)	From			To				
					369+00			385+00				
Vehicles	Head Car Number		Number of Cars		Equipment	N/A						
	N/A		N/A									
Description	<p>The FWSO inspector performed a remedial action verification between chain markers (CM) 369+00 and 385+00 on main tracks C1 &amp; C2.</p> <p>Observations:</p> <ul style="list-style-type: none"> <li>The on-track safety complied with the RWPM. Train Approach Warning Protection with two Advanced Watchmen/Lookouts allowed ample time to clear for on-coming trains.</li> <li>All trains complied with Permanent Order No. T-16-07, Rev. 1.</li> <li><b>All remaining FWSO remedial actions (ID #'s 836, 862, &amp; 997) on the aerial structure between CM 369+00 and CM 385+00 for both main tracks have not been repaired and/or replaced.</b></li> <li>FWSO noted, in general, that there are numerous grout pads cracking, crumbling, and/or failing that were not previously repaired during the SafeTrack Surge throughout the aerial structure between CM 369+00 and CM 385+00, which is contributing to loose fasteners and gauge widening (i.e. 56 3/8" static gauge with 1/2" lateral movement at approximately CM C2 384+00). There was evidence that many grout pads and direct fixation fasteners had been previously marked for repair (faded paint stick markings) but were not completed.</li> <li>FWSO noted multiple missing 3<sup>rd</sup> rail cover boards (CM C1 375+00, C2 376+50, C2 375+80, and C2 374+00).</li> <li>FWSO noted grout pad crumbling underneath switch at CM C2 371+00.</li> </ul>							Number of Defects		2		
								Recommended Finding?		No		
								Remedial Action Required?		Yes		
								Recommended Reinspection?		Yes		
Remedial Action	<ul style="list-style-type: none"> <li>WMATA must repair the failing grout pads and direct fixation fasteners on the aerial structure between CM 369+00 and CM 385+00 on both main tracks.</li> <li>WMATA must replace the missing 3<sup>rd</sup> rail cover boards at CM C1 375+00, C2 376+50, C2 375+80 and C2 374+00.</li> </ul>											





# Inspection Form

FOIA Exemption: All (b)(6)

Form FTA-IR-1

United States Department of Transportation  
Federal Transit Administration

## Agency/Department Information

Inspection Date	YYYY	MM	DD	Report Number	20170118-WMATA-WP-1		
	2017	01	18				
Rail Agency Name	Washington Metropolitan Area Transit Authority			Rail Agency Department	TRST	Sub- Department	Production
Rail Agency Department Contact Information	Name		Email		Office Phone		Mobile Phone
	[REDACTED]		[REDACTED]				
	[REDACTED]		[REDACTED]				
	[REDACTED]		[REDACTED]				
Inspection Location	A Line, track 2, between Medical Center and Bethesda.						

## Inspection Summary

Inspection Activity #	1	2	3	4	5	6
Activity Code	TRK-RWP-OBS	TRK-GEN-INS				
Inspection Units	1	1				
Inspection Subunits	6	6				
Defects (Number)	0	1				
Recommended Finding	No	Yes				
Remedial Action Required <sup>1</sup>	No	Yes				
Recommended Reinspection	No	Yes				

## Activity Summaries

Inspection Activity #	1	Inspection Subject					Roadway Worker Protection – Job Safety Briefing			Activity Code		TRK	RWP	OBS
Job Briefing Employee Name/Title	TRST 664, RWIC TRST 6072, Watchman/Lookout					Accompanied Inspector?	Yes	Out Brief Conducted	Yes	Time	1030 1330	Outside Shift	No	
Related Reports						Related CAPS / Findings								
Related Rules, SOPs, Standards, or Other	Ref		Rule or SOP			Standard			Other / Title		Checklist Reference			
	RWPM		P.O. T-16-07											
Inspection Location	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	Track Type	At-grade	Tunnel	Elevated	N/A			
	X								X					
Line(s)	A Line		Track Number	2	Chain Marker and/or Station(s)		From			To				
							A-08			A-10				
Vehicles	Head Car Number			Number of Cars		Equipment	N/A							
	N/A			N/A										
Description	The job safety briefing was provided by TRST Unit 664 at Medical Center Station. The briefing was thorough and fully compliant with WMATA requirements. It included WMATA level 1 ID check, the type of protection in place (Train Approach										Number of Defects		0	
											Recommended Finding?		No	
											Remedial Action Required?		No	

<sup>1</sup> The rail transit agency must provide FTA with the necessary evidence (e.g. maintenance work order system records, photos, documentation, records, data, or other evidence) to close out the Remedial Action. Closeout of Remedial Actions may also be subject to ongoing FTA verification inspections to ensure corrections are sufficient and effective.

Inspector in Charge - Signature		Date
WINSLOW L. POWELL <small>Digitally signed by WINSLOW L. POWELL DN: cn=US, o=U.S. Government, ou=DOT Headquarters, ou=FTAHQ, cn=WINSLOW L. POWELL Date: 2017.01.26 10:59:02 -0500</small>		
Inspector in Charge – Name	Inspection Team	
Winslow Powell	Alexander Nepa	



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Federal Transit Administration

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	Warning, or TAW), and potential hazards and hot spots. No exceptions were taken with the job safety briefing.  The Watchman/Lookout TRST 6072 did an exceptional job in the performance of his duties. His advance position ahead of the work group and use of the air horn provided the required 15 second clearance every time a train approached.	<b>Recommended Reinspection?</b>	No
<b>Remedial Action</b>	N/A		

<b>Inspection Activity #</b>	2	<b>Inspection Subject</b>	Track General Inspection				<b>Activity Code</b>	TRK	GEN	INS						
<b>Job Briefing Employee Name/Title</b>	TRST 664, RWIC TRST 6072 Watchman/Lookout		<b>Accompanied Inspector?</b>	Yes	<b>Out Brief Conducted</b>	Yes	<b>Time</b>	1030 1330	<b>Outside Shift</b>	No						
<b>Related Reports</b>			<b>Related CAPS / Findings</b>													
<b>Related Rules, SOPs, Standards, or Other</b>	Ref	Rule or SOP		Standard		Other / Title		Checklist Reference								
	TRST 1000															
<b>Inspection Location</b>	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	<b>Track Type</b>	At-grade	Tunnel	Elevated	N/A					
	X								X							
<b>Line(s)</b>	A Line	<b>Track Number</b>	2	<b>Chain Marker and/or Station(s)</b>		From			To							
						A-08			A-10							
<b>Vehicles</b>	Head Car Number		Number of Cars		<b>Equipment</b>	N/A										
	N/A		N/A													
<b>Description</b>	<p>An inspection of the A Line, track 2, from Medical Center Station to Bethesda Station was conducted. The FWSO inspector, WMATA personnel, and 3<sup>rd</sup> party contractors from Harsco were present for the inspection. The FWSO inspector performed the assessment using WMATA TRST 1000, dated January 1, 2015, Revision 6. Harsco inspectors performed their assessment using a newly revised, non-distributed version of the TRST 1000. As a result, the two reports may have inconsistent findings. The following concerns were observed:</p> <ul style="list-style-type: none"> <li>The lighting in the tunnel between Medical Center and Bethesda on track 2 is poor due to burnt out bulbs and dirty lenses. (TRST 1000, 10.15)</li> <li>Between CM 422+00 and 420+00 and between CM 440+00 and CM 448+00, standing water was not draining as designed. (TRST 1000, 3.2.2.2)</li> <li>At CM 419+00, there is maintenance debris on the catwalk, which presents a tripping hazard. (TRST 1000, 10.17.4.1)</li> <li>At 1112 hours a train entering Medical Center Station did not maintain the required 10 MPH while passing the work group. A lead car number was not obtained. The RWIC reported this incident to ROCC.</li> <li>At 1210 hours at CM 418+00, a WMATA money train did not maintain the required 10 MPH speed while passing the work group. A lead car number was not obtained. The RWIC reported this incident to ROCC.</li> </ul> <p>Note: Harsco inspectors identified yellow condition fastener defects at CM 439+50, 427+00, and 405+90 that were less than the minimum 90 inches as required in TRST 1000, dated January 1, 2015, Revision 6. They were not noted as defects in this report.</p>						<b>Number of Defects</b>		1							
							<b>Recommended Finding?</b>		Yes							
							<b>Remedial Action Required?</b>		Yes							
							<b>Recommended Reinspection?</b>		Yes							
<b>Remedial Action</b>	WMATA must remove the maintenance debris from the catwalk at CM 419+00.															



# Inspection Form

FOIA Exemption: All (b)(6)

Form FTA-IR-1

United States Department of Transportation  
Federal Transit Administration

## Agency/Department Information

Inspection Date	YYYY	MM	DD	Report Number	20170118-WMATA-WP-2		
	2017	01	18				
Rail Agency Name	Washington Metropolitan Area Transit Authority			Rail Agency Department	TRST	Sub- Department	
Rail Agency Department Contact Information	Name		Email		Office Phone		Mobile Phone
	[REDACTED]		[REDACTED]				
	[REDACTED]		[REDACTED]				
	[REDACTED]		[REDACTED]				
Inspection Location	D Line						

## Inspection Summary

Inspection Activity #	1	2	3	4	5	6
Activity Code	TRK-RWP-OBS	TRK-WI-OBS	TRK-WI-PI	TRK-WI-QAI		
Inspection Units	1	1	1	1		
Inspection Subunits	1	1	2	1		
Defects (Number)	0	1	2	0		
Recommended Finding	No	No	No	No		
Remedial Action Required <sup>1</sup>	No	Yes	Yes	No		
Recommended Reinspection	No	No	No	No		

## Activity Summaries

Inspection Activity #	1	Inspection Subject	Roadway Worker Protection					Activity Code	TRK	RWP	OBS
Job Briefing Employee Name/Title	TRK 642 RWIC TRK 6101 Watchman/Lookout		Accompanied Inspector?	yes	Out Brief Conducted	No	Time	1000 to 1500	Outside Shift	No	
Related Reports	Related CAPS / Findings										
Related Rules, SOPs, Standards, or Other	Ref	Rule or SOP		Standard		Other / Title		Checklist Reference			
	RWPM										
Inspection Location	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	Track Type	At-grade	Tunnel	Elevated	N/A
	X								X		
Line(s)	D	Track Number	1	Chain Marker and/or Station(s)		From		To			
						040+00		040+20			
Vehicles	Head Car Number		Number of Cars		Equipment	N/A					
	N/A		N/A								
Description	The Roadway Worker in Charge (RWIC) conducted a thorough job safety briefing. He identified the Watchman/Lookout and the type of warning that would be							Number of Defects		0	
								Recommended Finding?		No	

<sup>1</sup> The rail transit agency must provide FTA with the necessary evidence (e.g. maintenance work order system records, photos, documentation, records, data, or other evidence) to close out the Remedial Action. Closeout of Remedial Actions may also be subject to ongoing FTA verification inspections to ensure corrections are sufficient and effective.

Inspector in Charge – Signature		Date
WINSLOW L. POWELL <small>Digitally signed by WINSLOW L. POWELL DN: c=US, o=U.S. Government, ou=DOT Headquarters, ou=FTAHO, cn=WINSLOW L. POWELL Date: 2017.01.27 16:20:39 -05'00'</small>		
Inspector in Charge – Name	Inspection Team	
Winslow Powell	Kevin McDonald	



United States Department of Transportation  
Federal Transit Administration

Form FTA-IR-1

	provided (air horn). The roadway worker protection (RWP) in place was train approach warning (TAW). After authority was granted from the Rail Operation Control Center (ROCC), the Watchman/Lookout used individual train detection (IDT) to enter the track zone and establish TAW. The Watchman/Lookout did an exemplary job of providing effective warning. Extra trains were running with headways as little as :45.	<b>Remedial Action Required?</b>	No
	Even though RWP was established within WMATA regulations, the use of ITD to establish a work zone in transit conditions is not up to current industry best practices for RWP. The use of Foul Time to establish work zones should be encouraged.	<b>Recommended Re-inspection?</b>	No
<b>Remedial Action</b>	N/A		

<b>Inspection Activity #</b>	2	<b>Inspection Subject</b>	Track Walking Observation					<b>Activity Code</b>	TRK	WI	OBS
<b>Job Briefing Employee Name/Title</b>	TRK 642 RWIC TRK 6101 Watchman/Lookout		<b>Accompanied Inspector?</b>	Yes	<b>Out Brief Conducted</b>	No	<b>Time</b>	10:00 to 15:00	<b>Outside Shift</b>	No	
<b>Related Reports</b>			<b>Related CAPS / Findings</b>								
<b>Related Rules, SOPs, Standards, or Other</b>	Ref	Rule or SOP		Standard		Other / Title		Checklist Reference			
	MSRPH	4.227 (d)									
<b>Inspection Location</b>	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	<b>Track Type</b>	At-grade	Tunnel	Elevated	N/A
	X								X		
<b>Line(s)</b>	D	<b>Track Number</b>	1	<b>Chain Marker and/or Station(s)</b>		From		To			
						040+00		040+20			
<b>Vehicles</b>	Head Car Number		Number of Cars		<b>Equipment</b>	N/A					
	N/A		N/A								
<b>Description</b>	The FWSO inspector observed the contractor inspector use a cell phone to take a picture of a track defect while that inspector was in the foul of track 1, at chain marker 026+00. Per MSRPH rule 4.227 (d): "It is prohibited to use a cell phone while engaged in other maintenance activities in the field that require your full attention to maintain safety (inspecting track, using power equipment, etc.)."							<b>Number of Defects</b>		1	
								<b>Recommended Finding?</b>		No	
								<b>Remedial Action Required?</b>		Yes	
								<b>Recommended Re-inspection?</b>		No	
<b>Remedial Action</b>	WMATA should ensure supervisory controls are in place to observe policy infractions and consider appropriate corrective actions for such violators.										

<b>Inspection Activity #</b>	3	<b>Inspection Subject</b>	Track Walk – Physical Inspection					<b>Activity Code</b>	TRK	WI	PI
<b>Job Briefing Employee Name/Title</b>	TRK 642 RWIC TRK 6101 Watchman/Lookout		<b>Accompanied Inspector?</b>	Yes	<b>Out Brief Conducted</b>	No	<b>Time</b>	1000 to 1500	<b>Outside Shift</b>	No	
<b>Related Reports</b>			<b>Related CAPS / Findings</b>								
<b>Related Rules, SOPs, Standards, or Other</b>	Ref	Rule or SOP		Standard		Other / Title		Checklist Reference			
	TRST 1000										
<b>Inspection Location</b>	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	<b>Track Type</b>	At-grade	Tunnel	Elevated	N/A
	X								X		
<b>Line(s)</b>	D	<b>Track Number</b>	1	<b>Chain Marker and/or Station(s)</b>		From		To			
						040+00		040+20			
<b>Vehicles</b>	Head Car Number		Number of Cars		<b>Equipment</b>	N/A					
	N/A		N/A								

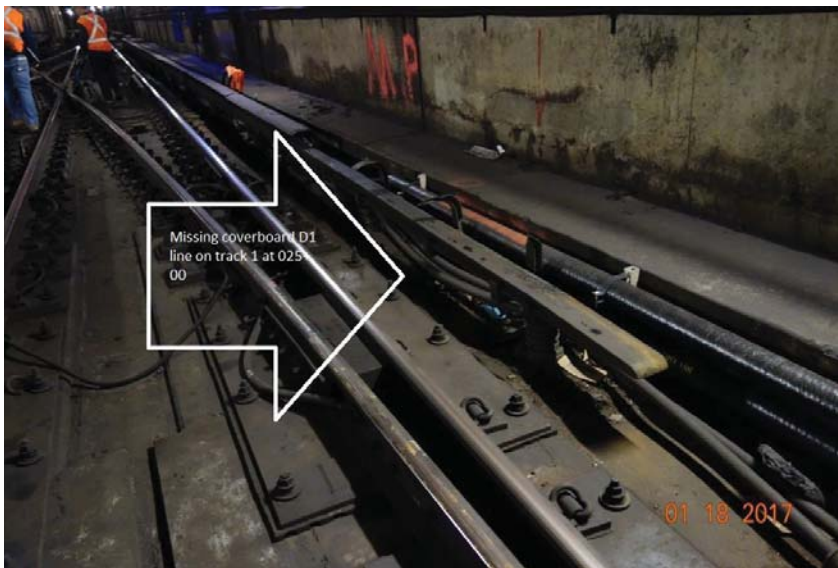


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Federal Transit Administration

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<b>Description</b>	<p>The FWSO inspector observed a missing 3<sup>rd</sup> rail cover board on track 1 at chain marker 025+00.</p> <p>The FWSO inspector also observed improper and inadequate drainage at chain marker 021+50. Even though these sections apply to ballasted track, excess water in a direct fixation setting can cause surface porosity and corrosive action on the rail base.</p>	<b>Number of Defects</b>	2
		<b>Recommended Finding?</b>	No
		<b>Remedial Action Required?</b>	Yes
		<b>Recommended Re-inspection?</b>	No
<b>Remedial Action</b>	<ul style="list-style-type: none"> <li>Per TRST 1000 sections 13.25 and 13.3.14, WMATA must replace missing 3<sup>rd</sup> rail cover board at chain marker 025+00.</li> <li>Per TRST 1000 sections 8.8.1, and 8.8.2, WMATA must repair leaking tunnel walls and/or provide adequate drainage at 021+50.</li> </ul>		

<b>Inspection Activity #</b>	4	<b>Inspection Subject</b>	Quality Assessment of Contract Inspections					<b>Activity Code</b>	TRK	WI	QAI							
<b>Job Briefing Employee Name/Title</b>	TRK 642 RWIC TRK 6101 Watchman/Lookout		<b>Accompanied Inspector?</b>	Yes	<b>Out Brief Conducted</b>	No	<b>Time</b>	1000 to 1500	<b>Outside Shift</b>	No								
<b>Related Reports</b>			<b>Related CAPS / Findings</b>															
<b>Related Rules, SOPs, Standards, or Other</b>	Ref	Rule or SOP		Standard		Other / Title		Checklist Reference										
<b>Inspection Location</b>	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	<b>Track Type</b>	At-grade	Tunnel	Elevated	N/A							
	X								X									
<b>Line(s)</b>	D	<b>Track Number</b>	1	<b>Chain Marker and/or Station(s)</b>	From			To										
					040+00			040+20										
<b>Vehicles</b>	Head Car Number		Number of Cars		<b>Equipment</b>	N/A												
	N/A		N/A															
<b>Description</b>	<p>The FWSO inspector observed contract inspectors performing required WMATA track inspections. Contract inspectors performed detailed turnout and switch inspections to include gauge, cross level, guard face gauge, flangeway width, as well as depth, fasteners, and surface and alignment. Contractors performed a thorough and comprehensive inspection.</p>						<b>Number of Defects</b>	0										
							<b>Recommended Finding?</b>	No										
							<b>Remedial Action Required?</b>	No										
	<p>The FWSO inspector was instructed to evaluate the contractor's new amended version of TRST 1000. The FWSO inspector did a cursory examination of the new amended field version of TRST 1000 and could not discern a noticeable difference. Further inspection is needed to complete the evaluation of this new document.</p>						<b>Recommended Re-inspection?</b>	No										
<b>Remedial Action</b>	N/A																	





# Inspection Form

FOIA Exemption: All (b)(6)

Form FTA-IR-1

United States Department of Transportation  
Federal Transit Administration

## Agency/Department Information

Inspection Date	YYYY	MM	DD	Report Number	20170119-WMATA-AMD-1		
	2017	01	19				
Rail Agency Name	Washington Metropolitan Area Transit Authority			Rail Agency Department	POWR	Sub- Department	PMI
Rail Agency Department Contact Information	Name		Email		Office Phone		Mobile Phone
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
Inspection Location	B05 – Brookland – TB (Tie Breaker House)						

## Inspection Summary

Inspection Activity #	1	2	3	4	5	6
Activity Code	TP-RM-OBS					
Inspection Units	1					
Inspection Subunits	5					
Defects (Number)	0					
Recommended Finding	NO					
Remedial Action Required <sup>1</sup>	NO					
Recommended Reinspection	NO					

## Activity Summaries

Inspection Activity #	1	Inspection Subject	B05 - Brookland TB - DC Switchgear (Powell) 750VDC Type NDC (High Speed) Circuit Breaker Preventive Maintenance Inspection				Activity Code	TP	RM	OBS	
Job Briefing Employee Name/Title	WMATA Electrician		Accompanied Inspector?	Yes	Out Brief Conducted	Yes	Time	1000-1400	Outside Shift	No	
Related Reports	20161202-WMATA-WP-1		Related CAPS / Findings								
Related Rules, SOPs, Standards, or Other	Ref	Rule or SOP		Standard		Other / Title		Checklist Reference			
	PMI FOR 750 VOLT DC TYPE NDC (HIGH SPEED) CIRCUIT BREAKER FOR POWELL SWITCHGEAR, 365 DAY INSPECTION – REV 0, JUNE 30, 2014										
Inspection Location	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	Track Type	At-grade	Tunnel	Elevated	N/A
			X								X
Line(s)	B-Line	Track Number	N/A		Chain Marker and/or Station(s)		From		To		
							B05 – Brookland TB		B05 – Brookland TB		
Vehicles	Head Car Number		Number of Cars		Equipment	750VDC Type NDC (High Speed) Circuit Breaker					
	N/A		N/A								

<sup>1</sup> The rail transit agency must provide FTA with the necessary evidence (e.g. maintenance work order system records, photos, documentation, records, data, or other evidence) to close out the Remedial Action. Closeout of Remedial Actions may also be subject to ongoing FTA verification inspections to ensure corrections are sufficient and effective.

Inspector in Charge - Signature	ANGELA M DLUGER		Digitally signed by ANGELA M DLUGER DN: c=US, o=U.S. Government, ou=FTA HQ, ou=DOT Headquarters, cn=ANGELA M DLUGER Date: 2017.02.03 16:36:04 -05'00'	Date February 3, 2017
Inspector in Charge – Name Angela Dluger	Inspection Team Tino Sahoo			





United States Department of Transportation  
Federal Transit Administration

Form FTA-IR-1

Description	<p>This preventive maintenance inspection was conducted on the same type of circuit breaker—750VDC Type NDC (High Speed)—as noted in the FWSO inspection report 20161202-WMATA-WP-1. This inspection was done at a different location and with a different WMATA crew. The main purpose was to observe that WMATA electricians are cross-trained and have expertise with different electrical equipment throughout the system.</p> <p>Two WMATA High Voltage Power Electricians performed the preventive maintenance on the lineup (five total) of 750V DC Type NDC (High Speed) circuit breakers on the Powell DC switchgear. These breakers energize the 3<sup>rd</sup> rail trackside. The job safety briefing for electricians was done by the supervisor at the crew's home rail yard or facility before appearing at the work site, Brookland Tie Breaker House. The briefing included potential safety hazards and work to be performed. A job safety briefing was also given to FWSO personnel at the Tie-Breaker. No issues or concerns were noted.</p> <p>The crew notified the Rail Operations Control Center (ROCC) that power was to be de-energized to the individual breaker (ex. TB 172-41). Once permission was given by ROCC, the WMATA electricians put on switching suits and 1000V rated rubber gloves to de-energize and rack out the individual breaker. During this switching event, per WMATA protocol, any non WMATA personnel must leave the room in case of arc flash events. Maintenance was then performed according to the published PMI, and no issues were observed.</p> <p>General Procedure (See Figure 1) for Preventive Maintenance of 750V DC Type NDC (High Speed) Circuit Breakers:</p> <ol style="list-style-type: none"><li>Each of the 5 breakers have to be racked out of their respective DC SWGR cubicle one at a time and hence maintenance is performed one breaker at a time.</li><li>Any brake dust and contaminants were wiped away from the surface and internals of the breaker using industrial wipes. A blower and vacuum were used to blow and suck contaminants from the device.</li><li>The copper bus "stabs" were greased or lubricated with the manufacturer recommended lubricants.</li><li>The breaker was wheeled to the breaker test cabinet, which is mounted on the adjacent wall and connected. "Open" and "close" mechanisms of the breaker were tested using the test cabinet. In addition, the high speed trip mechanism of the breaker was also tested. (See Figure 3 &amp; 4)</li><li>Micro-Ohm meter was used to measure resistance of the copper bus to ensure it was within the proper limits (very low ohm reading). (See Figure 2)</li><li>Inspection of the frame of the high speed breaker was done visually.</li><li>Inspection of the DC SWGR cubicle was done visually for rust, corrosion, loose connections, dust, contaminants, working switches and knobs, DC control power components, and working space heaters.</li><li>Electricians re-racked the high speed breaker back into the DC SWGR cubicle and verified it was properly working. Verification was done by checking the operation of the circuit breaker in the TEST position (operate controls - close and trip breakers electrically), including the annunciator - alarm or target operation, etc.</li><li>ROCC was notified that the individual breaker was racked in and energized.</li><li>Procedures 1-9 were repeated for the other 4 breakers in the lineup.</li></ol>	Number of Defects	0
		Recommended Finding?	No
		Remedial Action Required?	No
Remedial Action	N/A		



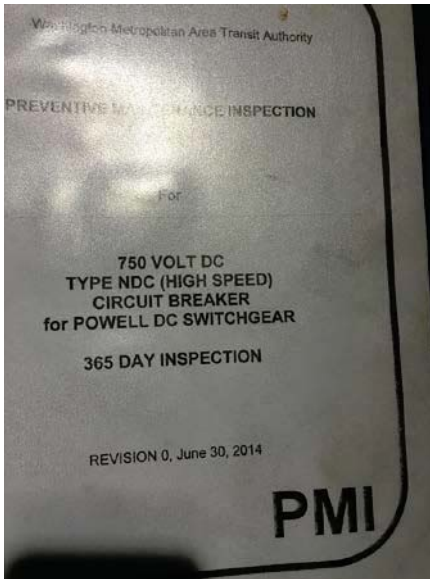


FIGURE 1 – HARDCOPY PMI FOR 750V DC  
TYPE NDC HIGH SPEED BREAKER

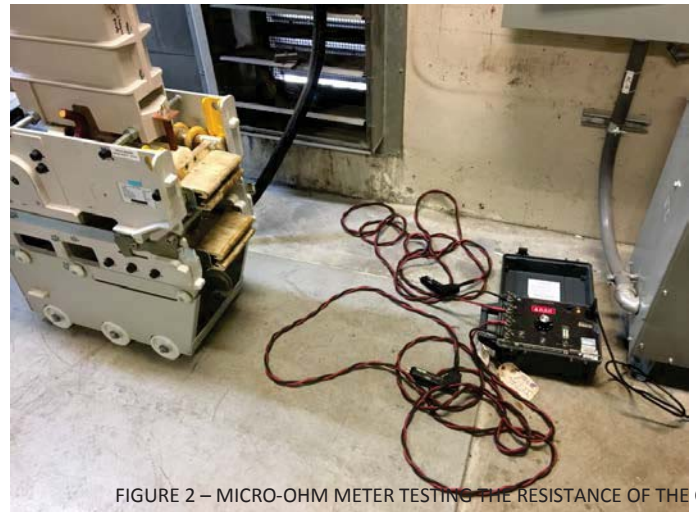


FIGURE 2 – MICRO-OHM METER TESTING THE RESISTANCE OF THE COPPER  
BUS STABS TO ENSURE THE RESISTANCE IS WITHIN RANGE



FIGURE 3 – USING TEST CABINET TO TEST OPEN/CLOSE MECHANISM OF  
CIRCUIT BREAKER



FIGURE 4 – TYPE NDC (HIGH SPEED) CIRCUIT BREAKER  
CONNECTED TO TEST CABINET



# Inspection Form

FOIA Exemption: All (b)(6)

Form FTA-IR-1

United States Department of Transportation  
Federal Transit Administration

## Agency/Department Information

Inspection Date	YYYY	MM	DD	Report Number	20170119-WMATA-AMD-2		
	2017	01	19				
Rail Agency Name	Washington Metropolitan Area Transit Authority			Rail Agency Department	ROCC	Sub- Department	N/A
Rail Agency Department Contact Information	Name		Email		Office Phone		Mobile Phone
	[REDACTED]		[REDACTED]				
Inspection Location	Carmen Turner Facility 3500 Pennsy Drive, Hyattsville, MD 20785						

## Inspection Summary

Inspection Activity #	1	2	3	4	5	6
Activity Code	ROCC-RC-OBS					
Inspection Units	1					
Inspection Subunits	0					
Defects (Number)	0					
Recommended Finding	No					
Remedial Action Required <sup>1</sup>	No					
Recommended Reinspection	No					

## Activity Summaries

Inspection Activity #	1	Inspection Subject			Rules Compliance & Safety Management Inspection (SMI) Required Actions Observation of Rail Traffic Controllers (RTC)			Activity Code		ROCC	RC	OBS
Job Briefing Employee Name/Title	N/A			Accompanied Inspector?	N/A	Out Brief Conducted	Yes	Time	1200 – 1315	Outside Shift	No	
Related Reports	Safety Management Inspection (SMI), Final Report, June 17, 2015			Related CAPS / Findings		Required Actions: R-3, R-1-3-a, R-1-3-b, R-1-6-a, and R-1-8-a						
Related Rules, SOPs, Standards, or Other	Ref		Rule or SOP		Standard		Other / Title		Checklist Reference			
	MetroRail Safety Rules and Procedures Handbook & Roadway Worker Protection Manual (2014)		Section 1 – General Rules (Radio Usage and Operation): Rules 1.69 – 1.88		X		X		X			
	Permanent Order		NO. T-16-10									
Inspection Location	Main Track	Yard	Station	OCC	RTA Facility	Main Track	Yard	At-grade	Tunnel	Elevated	N/A	
				X							X	
Line(s)	N/A		Track Number	N/A	Chain Marker and/or Station(s)		From		To			
							N/A		N/A			
Vehicles	Head Car Number		Number of Cars		Equipment		N/A					
	N/A		N/A									

<sup>1</sup> The rail transit agency must provide FTA with the necessary evidence (e.g. maintenance work order system records, photos, documentation, records, data, or other evidence) to close out the Remedial Action. Closeout of Remedial Actions may also be subject to ongoing FTA verification inspections to ensure corrections are sufficient and effective.

Inspector in Charge - Signature	<b>ANGELA M DLUGER</b>		Digitally signed by ANGELA M DLUGER DN: c=US, o=U.S. Government, ou=FTA HQ, ou=DOT Headquarters, cn=ANGELA M DLUGER Date: 2017.02.13 13:05:30 -05'00'	Date <b>February 13, 2017</b>
Inspector in Charge – Name Angela Dluger	Inspection Team Tamara Powell			



Description	<p>An FWSO inspector conducted an observation at the Rail Operations Control Center (ROCC) of the rail traffic controllers (RTC) on the afternoon shift at the Ops 1 console, which controls and over-sees operations on the Red Line. The FWSO inspector performed an observation and compliance check that focused mainly on ROCC required actions and radio usage and operation (General Rules, #1.69 – 1.88 and Permanent Order T-16-10). The observation and compliance check was based on findings from the Safety Management Inspection (SMI) report (both open and closed findings), as well as rules from the MetroRail Safety Rules &amp; Procedures Handbook.</p> <p>Observations related to SMI report findings:</p> <ul style="list-style-type: none"><li>Finding R-3: <i>“RTCs receive limited refresher training and no road days.”</i></li><li>R-1-3-a: <i>“WMATA must establish a program to provide each RTC with mandatory road days for territory familiarization and to keep up with changing system elements.”</i></li><li>R-1-3-b: <i>“WMATA must require all RTCs to obtain and maintain Level 4 Roadway Worker Protection training and certification.”</i><ul style="list-style-type: none"><li>The FWSO inspector observed the radio transmissions and performance of two RTCs. Both controllers have had Bridge Training (refresher course) and are RWP Level 4 trained and qualified.</li><li>RTC #1, the Radio Controller, has been employed at WMATA for 19 years, with 3 years in the ROCC.</li><li>RTC #2, the Button Controller, was an external hire with military air traffic controller experience and has 3 years at WMATA in the ROCC.</li></ul></li><li>R-1-6-a: <i>“WMATA must establish and enforce a proper protocol for language and terminology that is used over the radio – to include 100 percent word-for-word read-back for safety-related instructions and unusual train movements.”</i><ul style="list-style-type: none"><li>All personnel units and operators performed word-for-word confirmation of walking rights on the right-of-way (ROW). The RTC acknowledged full understanding of transmission over the radio and provided 100% repeat-back for all requests.</li><li>For each communication loop, RTCs closed out each transmission with “over” until closing the loop with “Central out.”</li></ul></li><li>R-1-8-a: <i>“WMATA must establish a clear policy that prohibits distractions from the use of cell phones and other electronic devices in the ROCC.”</i><ul style="list-style-type: none"><li>Inspector observed no cell phone or electronic device violations during observation period.</li></ul></li></ul> <p>There were no exceptions noted during this observation.</p>	Number of Defects	0
		Recommended Finding?	No
		Remedial Action Required?	No
		Recommended Reinspection?	No
Remedial Action	N/A		



# Inspection Form

FOIA Exemption: All (b)(6)

Form FTA-IR-1

United States Department of Transportation  
Federal Transit Administration

## Agency/Department Information

Inspection Date	YYYY	MM	DD	Report Number	20170119-WMATA-CB-1		
	2017	01	19				
Rail Agency Name	Washington Metropolitan Area Transit Authority			Rail Agency Department	TRST	Sub- Department	TKIN
Rail Agency Department Contact Information	Name			Email		Office Phone	
	[REDACTED]			[REDACTED]		[REDACTED]	
	[REDACTED]			[REDACTED]		[REDACTED]	
	[REDACTED]			[REDACTED]		[REDACTED]	
	[REDACTED]			[REDACTED]		[REDACTED]	
	[REDACTED]			[REDACTED]		[REDACTED]	
Inspection Location	Between Morgan Blvd and Largo Town Center (G Line, Track 2)						

## Inspection Summary

Inspection Activity #	1	2	3	4	5	6
Activity Code	TRK-JSB-OBS	TRK-WI-PI				
Inspection Units	1	1				
Inspection Subunits	0	1				
Defects (Number)	0	2				
Recommended Finding	No	No				
Remedial Action Required <sup>1</sup>	No	Yes				
Recommended Reinspection	No	Yes				

## Activity Summaries

Inspection Activity #	1	Inspection Subject					Job Safety Briefing			Activity Code		TRK	JSB	OBS
Job Briefing Employee Name/Title	TRST 685					Accompanied Inspector?	Yes	Out Brief Conducted	No	Time	1030-1200	Outside Shift	No	
Related Reports	N/A					Related CAPS / Findings			N/A					
Related Rules, SOPs, Standards, or Other	Ref		Rule or SOP			Standard			Other / Title		Checklist Reference			
	RWPM													
	MSRPH													
Inspection Location	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	Track Type	At-grade	Tunnel	Elevated	N/A			
	X								X	X				
Line(s)	G	Track Number	2	Chain Marker and/or Station(s)			From		To					
							557+00		623+00					
Vehicles	Head Car Number		Number of Cars			Equipment	N/A							
	N/A		N/A											
Description	TRST 685 provided a comprehensive job safety briefing. The briefing included the									Number of Defects		0		

<sup>1</sup> The rail transit agency must provide FTA with the necessary evidence (e.g. maintenance work order system records, photos, documentation, records, data, or other evidence) to close out the Remedial Action. Closeout of Remedial Actions may also be subject to ongoing FTA verification inspections to ensure corrections are sufficient and effective.

Inspector in Charge - Signature	<b>CHAD DAVID BROSKI</b>	Digitally signed by CHAD DAVID BROSKI DN: c=US, o=U.S. Government, ou=FRA FRACicagolL, ou=DOT FRACicagolL, cn=CHAD DAVID BROSKI Date: 2017.01.24 09:30:59 -06'00'	Date
Inspector in Charge - Name	Chad Broski		
Inspection Team	Chad Broski		



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Federal Transit Administration

Form FTA-IR-1

	work limits, the protection that would be used (Train Approach Warning), hazards that would be encountered, and the required Personal Protective Equipment (PPE). TRST 685 also reviewed the Roadway Access Guide pertaining to the inspection limits. He then inspected the work group to ensure they had the necessary PPE and Roadway Worker Protection (RWP) training. He also required the work group to acknowledge understanding of the on-track safety procedures.							<b>Recommended Finding?</b>		No	
								<b>Remedial Action Required?</b>		No	
								<b>Recommended Reinspection?</b>		No	
<b>Remedial Action</b>		N/A									

<b>Inspection Activity #</b>	2		<b>Inspection Subject</b>				General Track Observations				<b>Activity Code</b>		TRK		WI		PI			
<b>Job Briefing Employee Name/Title</b>	TRST 685				<b>Accompanied Inspector?</b>		Yes		<b>Out Brief Conducted</b>		No		<b>Time</b>		1030-1200		<b>Outside Shift</b>		No	
<b>Related Reports</b>		N/A				<b>Related CAPS / Findings</b>				N/A										
<b>Related Rules, SOPs, Standards, or Other</b>		Ref		Rule or SOP				Standard				Other / Title				Checklist Reference				
		RWPM						TRST 1000				Permanent Order No. T-16-07, Rev. 1								
		MSRPH																		
<b>Inspection Location</b>		Main Track	Yard	Station	OCC	RTA Facility	FTA Office	<b>Track Type</b>		At-grade		Tunnel		Elevated		N/A				
		X										X		X						
<b>Line(s)</b>		G	<b>Track Number</b>		2		<b>Chain Marker and/or Station(s)</b>		From				To							
									557+00				623+00							
<b>Vehicles</b>		Head Car Number			Number of Cars			<b>Equipment</b>		N/A										
		N/A			N/A															
<b>Description</b>		<p>The FWSO inspector performed general track observations between chain markers (CM) 557+00 and 623+00 on main track G2.</p> <p>Observations:</p> <ul style="list-style-type: none"> <li>The on-track safety complied with the RWPM. Train Approach Warning Protection with a designated Watchman/Lookout allowed ample time to clear for on-coming trains.</li> <li>All trains complied with Permanent Order No. T-16-07, Rev. 1.</li> <li>FWSO noted severely worn gauge face (side wear) railhead, combined with a severely compromised angle of side wear, on the high side of the curve at G2 CM 607+00 on top of the aerial structure over Interstate 95. Static gauge measured 56 ¾ inches plus ¼ inch lateral plate movement for a total gauge of 57 inches. There was evidence of loose fasteners and an isolated spot of crumbling grout pads contributing to failed direct fixation fasteners directly across from each other.</li> <li>FWSO noted missing 3<sup>rd</sup> rail cover boards at G2 CM 573+00 and G2 CM 612+00.</li> </ul>										<b>Number of Defects</b>		2						
												<b>Recommended Finding?</b>		No						
												<b>Remedial Action Required?</b>		Yes						
												<b>Recommended Reinspection?</b>		Yes						
<b>Remedial Action</b>		<ul style="list-style-type: none"> <li>WMATA must replace the curve worn rail on the aerial structure at G2 CM 607+00 and repair the loose direct fixation fasteners.</li> <li>WMATA must replace the missing 3<sup>rd</sup> rail cover boards at G2 CM 573+00 and G2 CM 612+00.</li> </ul>																		



# Inspection Form

FOIA Exemption: All (b)(6)

Form FTA-IR-1

United States Department of Transportation  
Federal Transit Administration

## Agency/Department Information

Inspection Date	YYYY	MM	DD	Report Number	20170119-WMATA-WP-1		
	2017	01	19				
Rail Agency Name	Washington Metropolitan Area Transit Authority			Rail Agency Department	TRST	Sub- Department	Production
Rail Agency Department Contact Information	Name		Email		Office Phone		Mobile Phone
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
Inspection Location	A Line, track 2, between Bethesda Station and Friendship Heights.						

## Inspection Summary

Inspection Activity #	1	2	3	4	5	6
Activity Code	TRK-RWP-OBS	TRK-GEN-INS				
Inspection Units	1	1				
Inspection Subunits	6	6				
Defects (Number)	0	5				
Recommended Finding	No	Yes				
Remedial Action Required <sup>1</sup>	No	Yes				
Recommended Reinspection	No	Yes				

## Activity Summaries

Inspection Activity #	1	Inspection Subject					Roadway Worker Protection – Job Safety Briefing			Activity Code		TRK	RWP	OBS
Job Briefing Employee Name/Title	TRST 664, RWIC TRST 6072, Watchman/Lookout					Accompanied Inspector?	Yes	Out Brief Conducted	Yes	Time	1000 1330	Outside Shift	No	
Related Reports						Related CAPS / Findings								
Related Rules, SOPs, Standards, or Other	Ref		Rule or SOP			Standard			Other / Title		Checklist Reference			
	RWPM													
Inspection Location	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	Track Type	At-grade	Tunnel	Elevated	N/A			
	X								X					
Line(s)	A Line		Track Number	2	Chain Marker and/or Station(s)		From		To					
							A-08		A-09					
Vehicles	Head Car Number		Number of Cars			Equipment	N/A							
	N/A		N/A											
Description	The job safety briefing was provided by TRST 664 at Bethesda Station. The briefing was thorough and fully compliant with WMATA requirements. It included WMATA level 1 ID check, the type of protection in place (Train Approach Warning, or TAW),								Number of Defects		0			
									Recommended Finding?		No			
									Remedial Action Required?		No			

<sup>1</sup> The rail transit agency must provide FTA with the necessary evidence (e.g. maintenance work order system records, photos, documentation, records, data, or other evidence) to close out the Remedial Action. Closeout of Remedial Actions may also be subject to ongoing FTA verification inspections to ensure corrections are sufficient and effective.

Inspector in Charge - Signature WINSLOW L. POWELL		<small>Digitally signed by WINSLOW L. POWELL DN: cn=US, o=U.S. Government, ou=DOT Headquarters, ou=FTAHQ, cn=WINSLOW L. POWELL Date: 2017.01.26 11:00:24 -0500</small>	Date
Inspector in Charge – Name Winslow Powell	Inspection Team Alexander Nepa		





United States Department of Transportation  
Federal Transit Administration

Form FTA-IR-1

	and potential hazards and hot spots. No exceptions were taken with the job safety briefing.  Watchman/Lookout TRST 6072 did an exceptional job in the performance of his duties. He advanced himself in a position ahead of the work group and used the air horn to provide the required 15 second clearance.	<b>Recommended Reinspection?</b>	No
<b>Remedial Action</b>	N/A		

<b>Inspection Activity #</b>	2	<b>Inspection Subject</b>	Track General Inspection					<b>Activity Code</b>	TRK	GEN	INS
<b>Job Briefing Employee Name/Title</b>	TRST 664, RWIC TRST 6072 Watchman/Lookout		<b>Accompanied Inspector?</b>	Yes	<b>Out Brief Conducted</b>	Yes	<b>Time</b>	1000 1330	<b>Outside Shift</b>	No	
<b>Related Reports</b>			<b>Related CAPS / Findings</b>								
<b>Related Rules, SOPs, Standards, or Other</b>	Ref	Rule or SOP		Standard		Other / Title		Checklist Reference			
	TRST 1000	P.O. T-16-07									
<b>Inspection Location</b>	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	<b>Track Type</b>	At-grade	Tunnel	Elevated	N/A
	X								X		
<b>Line(s)</b>	A Line	<b>Track Number</b>	2	<b>Chain Marker and/or Station(s)</b>		From		To			
						A-08		A-09			
<b>Vehicles</b>	<b>Head Car Number</b>		<b>Number of Cars</b>		<b>Equipment</b>	N/A					
	N/A		N/A								
<b>Description</b>	<p>An inspection was conducted of the A Line, track 2, from Bethesda Station to CM 341+00. The FWSO inspector, WMATA personnel, and 3<sup>rd</sup> party contractors from Harsco were present. The FWSO inspector performed the assessment using WMATA TRST 1000, dated January 1, 2015, Revision 6. Harsco inspectors performed their assessment using a newly revised, non-distributed version of the TRST 1000. As a result, the two reports may have inconsistent findings. The following concerns were observed:</p> <ul style="list-style-type: none"> <li>The lighting in the tunnel between CM 379+00 and Friendship Heights Station on track two is poor due to burnt out bulbs and dirty lenses. (TRST 1000, 10.15)</li> <li>Standing water not draining as designed at the following locations (TRST 1000, 3.2.2.2): <ul style="list-style-type: none"> <li>Between CM 395+00 and 389+00 on track 2 throughout Bethesda Station</li> <li>Between CM 353+00 and CM 355+00</li> <li>Between CM 352+00 and CM 350+00</li> <li>Between CM 343+00 and CM 341+00</li> </ul> </li> <li>At CM 351+70, a tunnel leak led to standing water and draining onto the 3<sup>rd</sup> rail. (TRST 1000, 3.2.2.4)</li> <li>At CM 373+00, three (3) defective fasteners were observed in a row, 116 inches between non-defective holding fasteners. (TRST 1000, 7.7)</li> <li>At CM 354+00, right rail, four (4) defective fasteners were observed in a row, 91 inches between non-defective holding fasteners. (TRST 1000, 7.7)</li> <li>At CM 351+80, two (2) defective fasteners were observed in a row, 93 inches between non-defective holding fasteners. (TRST 1000, 7.7)</li> <li>At CM 348+00 three (3) defective fasteners were observed in a row, 93 inches between non-defective holding fasteners. (TRST 1000, 7.7)</li> <li>At 1045 hours, a train with lead car number 5086 failed to slow to the required 10 MPH while passing the watchman. The RWIC reported this incident to ROCC. (P.O. T-16-07)</li> <li>At 1050 hours, a train with lead car number 7256 failed to slow to the required 10 MPH while passing the watchman. The RWIC reported this incident to ROCC. (P.O. T-16-07)</li> <li>At 1232 hours, a new 7 series test train failed to comply with P.O. T-16-</li> </ul>						<b>Number of Defects</b>		5		
							<b>Recommended Finding?</b>		Yes		
							<b>Remedial Action Required?</b>		Yes		



	<p>07. The train stopped at the work group and then proceeded at full speed. It is estimated that the tail end of the train was close to 40 MPH when it passed the work group. The RWIC reported the incident to ROCC.</p> <ul style="list-style-type: none"><li>• At 1246 hours, a train with lead car number 7042 failed to maintain the required 10 MPH while passing the work group. The RWIC reported the incident to ROCC. (<i>P.O. T-16-07</i>)</li><li>• At 1329 hours, a train with lead car number 7082 leaving Friendship Heights failed to slow down at all to the required 10 MPH while passing the work group. The RWIC reported this incident to ROCC. (<i>P.O., T-16-07</i>)</li></ul>		
Remedial Action	<ul style="list-style-type: none"><li>• WMATA must repair the tunnel leak contributing to standing water and draining onto the 3<sup>rd</sup> rail at CM 351+70.</li><li>• WMATA must repair the three (3) defective fasteners at CM 373+00.</li><li>• WMATA must repair the four (4) defective fasteners at CM 354+00.</li><li>• WMATA must repair the two (2) defective fasteners at CM 351+80.</li><li>• WMATA must repair the three (3) defective fasteners at CM 348+00.</li></ul>		





# Inspection Form

FOIA Exemption: All (b)(6)

Form FTA-IR-1

United States Department of Transportation  
Federal Transit Administration

## Agency/Department Information

Inspection Date	YYYY	MM	DD	Report Number	20170119-WMATA-WP-2		
	2017	01	19				
Rail Agency Name	Washington Metropolitan Area Transit Authority			Rail Agency Department	TRST	Sub- Department	
Rail Agency Department Contact Information	Name		Email		Office Phone		Mobile Phone
	[REDACTED]		[REDACTED]				
	[REDACTED]		[REDACTED]				
	[REDACTED]		[REDACTED]				
Inspection Location	D Line						


## Inspection Summary

Inspection Activity #	1	2	3	4	5	6
Activity Code	TRK-RWP-OBS	TRK-WI-OBS	TRK-WI-PI			
Inspection Units	1	1	1			
Inspection Subunits	1	1	6			
Defects (Number)	0	1	5			
Recommended Finding	No	No	No			
Remedial Action Required <sup>1</sup>	No	Yes	Yes			
Recommended Reinspection	No	No	Yes			

## Activity Summaries

Inspection Activity #	1	Inspection Subject					Roadway Worker Protection			Activity Code		TRK	RWP	OBS
Job Briefing Employee Name/Title	RWIC TRST 602					Accompanied Inspector?	Yes	Out Brief Conducted	No	Time	1000 to 1500	Outside Shift	No	
Related Reports						Related CAPS / Findings								
Related Rules, SOPs, Standards, or Other	Ref		Rule or SOP		Standard		Other / Title		Checklist Reference					
	RWPM													
Inspection Location	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	Track Type	At-grade	Tunnel	Elevated	N/A			
	X							X		X				
Line(s)	D	Track Number	2	Chain Marker and/or Station(s)		From			To					
						295+00			283+00					
Vehicles	Head Car Number		Number of Cars		Equipment	N/A								
	N/A		N/A											
Description	The Roadway Worker in Charge (RWIC) conducted a thorough job safety briefing. He identified the Watchman/Lookout and the type of warning that would be									Number of Defects		0		
										Recommended Finding?		No		

<sup>1</sup> The rail transit agency must provide FTA with the necessary evidence (e.g. maintenance work order system records, photos, documentation, records, data, or other evidence) to close out the Remedial Action. Closeout of Remedial Actions may also be subject to ongoing FTA verification inspections to ensure corrections are sufficient and effective.

Inspector in Charge – Signature		Date
 <small>Digitally signed by WINSLOW L. POWELL DN: c=US, o=U.S. Government, ou=DOT Headquarters, ou=FTAHQ, cn=WINSLOW L. POWELL Date: 2017.01.27 16:03:58 -05'00'</small>		
Inspector in Charge – Name	Inspection Team	
Winslow Powell	Kevin McDonald	



United States Department of Transportation  
Federal Transit Administration

Form FTA-IR-1

	provided (air horn). The roadway worker protection (RWP) was train approach warning (TAW). After authority was granted from the Rail Operation Control Center (ROCC), the Watchman/Lookout used individual train detection (ITD) to enter the track zone and establish TAW. Even though RWP was established within WMATA regulations, the use of ITD to establish a work zone in transit conditions is not up to current industry best practices for RWP. The use of Foul Time to establish work zones should be encouraged.	Remedial Action Required?	No
		Recommended Re-inspection?	No
Remedial Action	N/A		

Inspection Activity #	2	Inspection Subject	Track Inspection – Walking Observation					Activity Code	TRK	WI	OBS
Job Briefing Employee Name/Title	RWIC TRST 602		Accompanied Inspector?	Yes	Out Brief Conducted	No	Time	1000 to 1500	Outside Shift	No	
Related Reports			Related CAPS / Findings								
Related Rules, SOPs, Standards, or Other	Ref	Rule or SOP		Standard		Other / Title		Checklist Reference			
	MSRPH	4.227 (d)									
Inspection Location	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	Track Type	At-grade	Tunnel	Elevated	N/A
	X							X		X	
Line(s)	D	Track Number	2	Chain Marker and/or Station(s)		From		To			
						295+00		283+00			
Vehicles	Head Car Number		Number of Cars		Equipment	N/A					
	N/A		N/A								
Description	The FWSO inspector observed the RWIC 602 use a cell phone to make a phone call at chain marker 286+00 while the RWIC was in the foul of track 2. Per MSRPH rule 4.227 (d): "It is prohibited to use a cell phone while engaged in other maintenance activities in the field that require your full attention to maintain safety (inspecting track, using power equipment, etc.)."							Number of Defects		1	
								Recommended Finding?		No	
								Remedial Action Required?		Yes	
								Recommended Re-inspection?		No	
Remedial Action	WMATA should ensure supervisory controls are in place to observe policy infractions and consider appropriate corrective actions for such violators.										

Inspection Activity #	3	Inspection Subject	Track Inspection – Physical Inspection					Activity Code	TRK	WI	PI
Job Briefing Employee Name/Title	RWIC TRST 602		Accompanied Inspector?	Yes	Out Brief Conducted	No	Time	1000 to 1500	Outside Shift	No	
Related Reports			Related CAPS / Findings								
Related Rules, SOPs, Standards, or Other	Ref	Rule or SOP		Standard		Other / Title		Checklist Reference			
	TRST 1000	6.14; 6.14.2.1									
Inspection Location	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	Track Type	At-grade	Tunnel	Elevated	N/A
	X							X		X	
Line(s)	D	Track	2	Chain Marker		From		To			



		<b>Number</b>		<b>and/or Station(s)</b>	295+00	283+00
<b>Vehicles</b>	Head Car Number	Number of Cars		<b>Equipment</b>	N/A	
	N/A	N/A				
<b>Description</b>	<p>The entire section from 295+00 to 283+00 is a combination of track conditions, only some of which individually amounted to deviations from the track safety standards, but that nevertheless require repair to provide for safe operations over the entire section of the D2 track.</p> <p>The FWSO inspector observed numerous instances of cracked grout pads on track 2 at chain markers 293+00, 289+75, 288+00, 287+00, 286+50. (TRST 1000, section 6.14 and 6.14.2.1) These cracked grout pads have resulted in loose stud/lag bolts throughout the entire section. Even though track workers arrived within one hour and began to tighten bolts, this is only a temporary measure. The bolts will once again be loose within approximately 90 days.</p> <p>FWSO and contract inspectors found a black condition at 286+50 that was immediately called in to the Rail Operations Control Center (ROCC) by the RWIC.</p>				<b>Number of Defects</b>	5
					<b>Recommended Finding?</b>	No
					<b>Remedial Action Required?</b>	Yes
					<b>Recommended Re-inspection?</b>	Yes
<b>Remedial Action</b>	<ul style="list-style-type: none"> <li>At chain marker 293+00, WMATA must remove the cracked grout pads and reinstall new, reinforced grout pads and stud/lag bolts.</li> <li>At chain marker 289+75, WMATA must remove the cracked grout pads and reinstall new, reinforced grout pads and stud/lag bolts.</li> <li>At chain marker 288+00, WMATA must remove the cracked grout pads and reinstall new, reinforced grout pads and stud/lag bolts.</li> <li>At chain marker 287+00, WMATA must remove the cracked grout pads and reinstall new, reinforced grout pads and stud/lag bolts.</li> <li>At chain marker 286+50, WMATA must remove the cracked grout pads and reinstall new, reinforced grout pads and stud/lag bolts.</li> </ul>					









# Inspection Form

FOIA Exemption: All (b)(6)

Form FTA-IR-1

United States Department of Transportation  
Federal Transit Administration

## Agency/Department Information

Inspection Date	YYYY	MM	DD	Report Number	20170120-WMATA-WP-1		
	2017	01	20				
Rail Agency Name	Washington Metropolitan Area Transit Authority			Rail Agency Department	RAIL	Sub- Department	RTRA
Rail Agency Department Contact Information	Name		Email		Office Phone		Mobile Phone
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
Inspection Location	Special observation throughout MetroRail system for Presidential Inauguration.						

## Inspection Summary

Inspection Activity #	1	2	3	4	5	6
Activity Code	RTRA-GEN-OBS					
Inspection Units	1					
Inspection Subunits	1					
Defects (Number)	0					
Recommended Finding	No					
Remedial Action Required <sup>1</sup>	No					
Recommended Reinspection	No					

## Activity Summaries

Inspection Activity #	1	Inspection Subject					Rail Operations Observation			Activity Code		RTRA	GEN	OBS
Job Briefing Employee Name/Title	None			Accompanied Inspector?	No	Out Brief Conducted	No	Time	0400-2100	Outside Shift	Yes			
Related Reports	N/A			Related CAPS / Findings		N/A								
Related Rules, SOPs, Standards, or Other	Ref		Rule or SOP		Standard		Other / Title		Checklist Reference					
	MSRPH													
Inspection Location	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	Track Type	At-grade	Tunnel	Elevated	N/A			
			X						X					
Line(s)	N/A		Track Number	N/A	Chain Marker and/or Station(s)		From		To					
							N/A							
Vehicles	Head Car Number		Number of Cars		Equipment	N/A								
	N/A		N/A											
Description	FWSO inspectors were on scene in various locations throughout the MetroRail system as well as the Rail Operations Control Center (ROCC) to observe WMATA operations during the Inauguration. WMATA operated an expanded service schedule to accommodate anticipated crowds. Inspectors noted minimal disruptions throughout the day, which included a trespasser and disabled train							Number of Defects		0				
								Recommended Finding?		No				
								Remedial Action Required?		No				
								Recommended Reinspection?		No				

<sup>1</sup> The rail transit agency must provide FTA with the necessary evidence (e.g. maintenance work order system records, photos, documentation, records, data, or other evidence) to close out the Remedial Action. Closeout of Remedial Actions may also be subject to ongoing FTA verification inspections to ensure corrections are sufficient and effective.

Inspector in Charge - Signature		Date
WINSLOW L. POWELL <small>Digitally signed by WINSLOW L. POWELL DN: cn=US, o=U.S. Government, ou=DOT Headquarters, ou=FTAHQ, cn=WINSLOW L. POWELL Date: 2017.01.27 19:06:37 -05'00'</small>		
Inspector in Charge - Name	Inspection Team	
Winslow Powell	Winslow Powell, Phil Herbert, Tamara Powell, Chris DiFatta, Bob Maniuszko, Tino Sahoo, Kevin McDonald, Alexander Nepa, Mike Vitale	





	<p>evacuation at Naylor Road.</p> <p>Inspectors at the ROCC observed operations for proper radio procedures, the noise level, and employee turnover to ensure proper information was given regarding operations. Additionally, WMATA activated the emergency command center and initiated incident command procedures. All operations and support departments were represented, which included, but was not limited to, ROCC, Bus Operations Control Center (BOCC), Transportation (rail and bus), Transit Police departments, Customer Service, Revenue department, Track, Power, Elevator/Escalator, and Car Maintenance. Beginning at 530 hours and every hour thereafter, the Emergency Management department facilitated hourly updates with all departments reporting in. Each hourly update concluded with a "lessons learned" segment. The FWSO inspector noted that this process was properly executed and no exceptions were taken.</p> <p>Overall, WMATA provided safe and efficient service to passengers throughout the day and was in compliance of their rules, policies, and procedures across the board.</p>		
Remedial Action	N/A		



# Inspection Form

FOIA Exemption: All (b)(6)

Form FTA-IR-1

United States Department of Transportation  
Federal Transit Administration

**Agency/Department Information**

Inspection Date	YYYY	MM	DD	Report Number	20170121-WMATA-WP-1		
	2017	01	21				
Rail Agency Name	Washington Metropolitan Area Transit Authority			Rail Agency Department	RAIL	Sub- Department	RTRA
Rail Agency Department Contact Information	Name		Email		Office Phone		Mobile Phone
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
Inspection Location	Special observation throughout MetroRail system for the Women's March on Washington. Observation coverage included Red, Orange, Blue, and Silver Lines and the Rail Operations Control Center (ROCC)						

**Inspection Summary**

Inspection Activity #	1	2	3	4	5	6
Activity Code	RTRA-GEN-OBS					
Inspection Units	1					
Inspection Subunits	4					
Defects (Number)	0					
Recommended Finding	No					
Remedial Action Required <sup>1</sup>	No					
Recommended Reinspection	No					

**Activity Summaries**

Inspection Activity #	1	Inspection Subject					Rail Operations Observation			Activity Code		RTRA	GEN	OBS
Job Briefing Employee Name/Title	None			Accompanied Inspector?	No	Out Brief Conducted	No	Time	0700 1500	Outside Shift	No			
Related Reports						Related CAPS / Findings								
Related Rules, SOPs, Standards, or Other	Ref		Rule or SOP		Standard			Other / Title		Checklist Reference				
	MSRPH													
Inspection Location	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	Track Type	At-grade	Tunnel	Elevated	N/A			
			X						X					
Line(s)	N/A	Track Number	N/A	Chain Marker and/or Station(s)			From		To					
							N/A		N/A					
Vehicles	Head Car Number		Number of Cars		Equipment		N/A							
	N/A		N/A											
Description	FWSO inspectors were on scene in various locations throughout the MetroRail system as well as the Rail Operations Control Center (ROCC) to observe WMATA operations during the Women's March. WMATA operated an expanded service schedule to accommodate the anticipated crowds, with trains running every three minutes. Inspectors observed WMATA's handling of crowded trains and platforms.							Number of Defects		0				
								Recommended Finding?		No				
								Remedial Action Required?		No				
								Recommended Reinspection?		No				

<sup>1</sup> The rail transit agency must provide FTA with the necessary evidence (e.g. maintenance work order system records, photos, documentation, records, data, or other evidence) to close out the Remedial Action. Closeout of Remedial Actions may also be subject to ongoing FTA verification inspections to ensure corrections are sufficient and effective.

Inspector in Charge - Signature		Date
WINSLOW L. POWELL <small>Digitally signed by WINSLOW L. POWELL DN: cn=US, o=U.S. Government, ou=FTAHQ, cn=WINSLOW L. POWELL Date: 2017.01.27 19:11:07 -05'00'</small>		
Inspector in Charge - Name	Inspection Team	
Winslow Powell	Tamara Powell, Alexander Nepa, Kevin McDonald	



	<p>Passenger safety was emphasized as WMATA operations made decisions to skip overcrowded stations downtown, impose slow speed restrictions when entering and exiting crowded stations, and switch entrances to exit or entrance only.</p> <p>In addition, WMATA activated the emergency command center and initiated incident command procedures. All operations and support departments were represented, including ROCC, Bus Operations Control Center (BOCC), Transportation (rail and bus), Transit Police departments, Customer Service, Revenue department, Track, Power, Elevator/Escalator, and Car Maintenance. Beginning at 530 hours and every hour thereafter, the Emergency Management department facilitated hourly updates with all departments reporting in. Each hourly update concluded with a “lessons learned” segment. The FWSO inspector noted that this process was properly executed and no exceptions were taken.</p> <p>Overall, WMATA provided safe and efficient service to passengers throughout the day and was in compliance with their rules, policies, and procedures across the board.</p>		
Remedial Action	N/A		



# Inspection Form

FOIA Exemption: All (b)(6)

Form FTA-IR-1

United States Department of Transportation  
Federal Transit Administration

## Agency/Department Information

Inspection Date	YYYY	MM	DD	Report Number	20170125-WMATA-AMD-1		
	2017	01	25				
Rail Agency Name	Washington Metropolitan Area Transit Authority			Rail Agency Department	TRST	Sub- Department	
Rail Agency Department Contact Information	Name		Email		Office Phone		Mobile Phone
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
Inspection Location	D line						

## Inspection Summary

Inspection Activity #	1	2	3	4	5	6
Activity Code	TRK-RWP-OBS	TRK-WI-OBS	TRK-WI-PI	TRK-WI-QAI		
Inspection Units	1	1	1	1		
Inspection Subunits	1	4	5	1		
Defects (Number)	0	3	4	0		
Recommended Finding	No	Yes	No	No		
Remedial Action Required <sup>1</sup>	No	No	Yes	No		
Recommended Reinspection	No	No	Yes	No		

## Activity Summaries

Inspection Activity #	1	Inspection Subject					RWP		Activity Code		TRK	RWP	OBS
Job Briefing Employee Name/Title	RWIC 642 Watchman/Lookout 6159					Accompanied Inspector?	No	Out Brief Conducted	No	Time	1000 to 1300	Outside Shift	No
Related Reports						Related CAPS / Findings							
Related Rules, SOPs, Standards, or Other	Ref		Rule or SOP		Standard		Other / Title		Checklist Reference				
	RWPM												
Inspection Location	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	Track Type	At-grade	Tunnel	Elevated	N/A		
	X							X	X				
Line(s)	D	Track Number	1	Chain Marker and/or Station(s)		From		To					
						238+00		228+60					
Vehicles	Head Car Number		Number of Cars		Equipment	N/A							
	N/A		N/A										
Description	The RWIC conducted a thorough job safety briefing and identified the Watchman/Lookout and how effective warning would be provided. The Roadway							Number of Defects		0			
								Recommended Finding?		No			
								Remedial Action Required?		No			

<sup>1</sup> The rail transit agency must provide FTA with the necessary evidence (e.g. maintenance work order system records, photos, documentation, records, data, or other evidence) to close out the Remedial Action. Closeout of Remedial Actions may also be subject to ongoing FTA verification inspections to ensure corrections are sufficient and effective.

Inspector in Charge – Signature	ANGELA M DLUGER		Digitally signed by ANGELA M DLUGER DN: c=US, o=U.S. Government, ou=FTAHQ, ou=DOT Headquarters, cn=ANGELA M DLUGER Date: 2017.02.03 17:00:21 -05'00'	Date February 3, 2017
Inspector in Charge – Name	Angela Dluger			
Inspection Team	Kevin McDonald			

Form FTA-IR-1

Version date: 8/26/16



United States Department of Transportation  
Federal Transit Administration

Form FTA-IR-1

	Worker Protection (RWP) would be Train Approach Warning (TAW). After authority was granted from the Rail Operations Control Center (ROCC), the Watchman/Lookout used Individual Train Detection (ITD) to enter the track zone and established TAW.	<b>Recommended Re-inspection?</b>	No
<b>Remedial Action</b>	N/A		

<b>Inspection Activity #</b>	2	<b>Inspection Subject</b>	Track inspection/observation					<b>Activity Code</b>	TRK	WI	OBS						
<b>Job Briefing Employee Name/Title</b>	RWIC 642 Watchman/Lookout 6159		<b>Accompanied Inspector?</b>	No	<b>Out Brief Conducted</b>	No	<b>Time</b>	1000 to 1300	<b>Outside Shift</b>	No							
<b>Related Reports</b>	<b>Related CAPS / Findings</b>																
<b>Related Rules, SOPs, Standards, or Other</b>	Ref		Rule or SOP		Standard		Other / Title		Checklist Reference								
	MSRPH		Permanent Order T-16-07 revision 1														
	MSRPH		4.227 (d)														
<b>Inspection Location</b>	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	<b>Track Type</b>	At-grade	Tunnel	Elevated	N/A						
	X							X	X								
<b>Line(s)</b>	D	<b>Track Number</b>	1	<b>Chain Marker and/or Station(s)</b>	From				To								
					238+00				228+60								
<b>Vehicles</b>	Head Car Number		Number of Cars		<b>Equipment</b>	N/A											
	N/A		N/A														
<b>Description</b>	<p>The inspector observed two violations of Permanent Order T-16-07 rev. 1, section B, bullet point 4, which states that trains must "continue at 10 MPH until the entire train is past personnel." The last car of an 8 car WMATA train must not pass the work crew before 45 seconds have elapsed. However the following was observed:</p> <ul style="list-style-type: none"> <li>At 1130 hours, an 8 car train outbound from Stadium Armory with head end car # 3227 approached work crew members on catwalk at 10 MPH then rapidly accelerated. The rear end car passed crew members within 30 seconds.</li> <li>At 1205 hours, an 8 car train outbound from Stadium Armory with head end car # 3270 approached work crew members on catwalk at 10 MPH then rapidly accelerated. The rear end car passed crew members within 35 seconds.</li> </ul> <p>FTA has issued previous remedial actions concerning P.O. T-16-07 and continues to monitor compliance.</p> <p>At 1230 hours, the FWSO inspector observed the RWIC 642 make a cell phone call while standing in between the two rails and fouling the track. Per MSRPH section 4.227 (d), "It is prohibited to use a cell phone while engaged in other maintenance activities in the field that require your full attention to maintain safety (inspecting track, using power equipment, etc.)."</p>							<b>Number of Defects</b>		3							
	<b>Recommended Finding?</b>		Yes														
	<b>Remedial Action Required?</b>		Yes														
<b>Remedial Action</b>						N/A											

<b>Inspection Activity #</b>	3	<b>Inspection Subject</b>	Track inspection/physical inspection					<b>Activity Code</b>	TRK	WI	PI		
<b>Job Briefing Employee Name/Title</b>	RWIC 642 Watchman/Lookout 6159		<b>Accompanied Inspector?</b>	No	<b>Out Brief Conducted</b>	No	<b>Time</b>	1000 to 1300	<b>Outside Shift</b>	No			
<b>Related Reports</b>	<b>Related CAPS / Findings</b>												
<b>Related Rules, SOPs, Standards, or Other</b>	Ref		Rule or SOP		Standard		Other / Title		Checklist Reference				
	TRST 1000		7.9.2.5; 3.2.2.4										
<b>Inspection Location</b>	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	<b>Track Type</b>	At-grade	Tunnel	Elevated	N/A		



United States Department of Transportation  
Federal Transit Administration

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	X							X	X		
<b>Line(s)</b>	D	<b>Track Number</b>	1	<b>Chain Marker and/or Station(s)</b>	From 238+00			To 228+60			
<b>Vehicles</b>	Head Car Number N/A		Number of Cars N/A		<b>Equipment</b>	N/A					
<b>Description</b>	The following issues were observed, including four defects: <ul style="list-style-type: none"> <li>• 237+25 2 cracked grout pads, left rail (no exception)</li> <li>• 231+10 4 effective fasteners within 142", left rail. Black condition noted to RWIC.</li> <li>• 230+60 4 effective fasteners within 135", right rail. Black condition noted to RWIC.</li> <li>• 230+30 Tunnel lining leak, right side, water on the safety walk area.</li> <li>• 229+60 Tunnel lining leak, right side, water on the safety walk area.</li> </ul>						<b>Number of Defects</b>		4		
							<b>Recommended Finding?</b>		No		
							<b>Remedial Action Required?</b>		Yes		
<b>Remedial Action</b>	<ul style="list-style-type: none"> <li>• Per TRST 1000 section 7.9.2.5, WMATA should tighten loose fasteners at 231+10.</li> <li>• Per TRST 1000 section 7.9.2.5, WMATA should tighten loose fasteners at 230+60.</li> <li>• Per TRST 1000 section 3.2.2.4, WMATA should repair tunnel lining leaks at 230+30.</li> <li>• Per TRST 1000 section 3.2.2.4, WMATA should repair tunnel lining leaks at 229+60.</li> </ul>										

<b>Inspection Activity #</b>	4	<b>Inspection Subject</b>	Contractor quality assessment					<b>Activity Code</b>	TRK	WI	QAI
<b>Job Briefing Employee Name/Title</b>	RWIC 642 Watchman/Lookout 6159			<b>Accompanied Inspector?</b>	No	<b>Out Brief Conducted</b>	No	<b>Time</b>	1000 to 1300	<b>Outside Shift</b>	No
<b>Related Reports</b>				<b>Related CAPS / Findings</b>							
<b>Related Rules, SOPs, Standards, or Other</b>	Ref	Rule or SOP			Standard		Other / Title		Checklist Reference		
<b>Inspection Location</b>	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	<b>Track Type</b>	At-grade	Tunnel	Elevated	N/A
	X							X	X		
<b>Line(s)</b>	D	<b>Track Number</b>	1	<b>Chain Marker and/or Station(s)</b>	From 238+00			To 228+60			
<b>Vehicles</b>	Head Car Number N/A		Number of Cars N/A		<b>Equipment</b>	N/A					
<b>Description</b>	The FWSO inspector observed contract inspectors performing required WMATA track inspections. Contract inspectors performed detailed turnout and switch inspections to include gauge, crosslevel, guard face gauge, flangeway width and depth, fasteners, and surface and alignment. Contractors performed a thorough and comprehensive inspection. Contractors are limiting inspections to track, geometry, and fasteners—not operating practices.						<b>Number of Defects</b>		0		
							<b>Recommended Finding?</b>		No		
							<b>Remedial Action Required?</b>		No		
<b>Remedial Action</b>	N/A										

Photos:







# Inspection Form

FOIA Exemption: All (b)(6)

Form FTA-IR-1

United States Department of Transportation  
Federal Transit Administration

## Agency/Department Information

Inspection Date	YYYY	MM	DD	Report Number	20170125-WMATA-AMD-2		
	2017	01	25				
Rail Agency Name	Washington Metropolitan Area Transit Authority			Rail Agency Department	ROCC	Sub- Department	N/A
Rail Agency Department Contact Information	Name		Email		Office Phone		Mobile Phone
	[REDACTED]		[REDACTED]				
Inspection Location	Carmen Turner Facility 3500 Pennsy Drive, Hyattsville, MD 20785						

## Inspection Summary

Inspection Activity #	1	2	3	4	5	6
Activity Code	ROCC-RC-OBS					
Inspection Units	1					
Inspection Subunits	0					
Defects (Number)	0					
Recommended Finding	No					
Remedial Action Required <sup>1</sup>	No					
Recommended Reinspection	No					

## Activity Summaries

Inspection Activity #	1	Inspection Subject			Rules Compliance & Safety Management Inspection (SMI) Required Actions Observation of Rail Traffic Controllers (RTC)			Activity Code		ROCC	RC	OBS
Job Briefing Employee Name/Title	N/A			Accompanied Inspector?	N/A	Out Brief Conducted	Yes	Time	1730 – 1940	Outside Shift	No	
Related Reports	Safety Management Inspection (SMI), Final Report, June 17, 2015			Related CAPS / Findings		Required Actions: R-3, R-1-3-a, R-1-3-b, R-1-4-b, and R-1-6-a						
Related Rules, SOPs, Standards, or Other	Ref		Rule or SOP		Standard		Other / Title		Checklist Reference			
	MetroRail Safety Rules and Procedures Handbook & Roadway Worker Protection Manual (2014)		Section 1 – General Rules (Radio Usage and Operation): Rules 1.69 – 1.88		X		X		X			
	Permanent Order		NO. T-16-10									
Inspection Location	Main Track	Yard	Station	OCC	RTA Facility	Main Track	Yard	At-grade	Tunnel	Elevated	N/A	
				X							X	
Line(s)	N/A		Track Number	N/A	Chain Marker and/or Station(s)		From		To			
							N/A		N/A			
Vehicles	Head Car Number		Number of Cars		Equipment		N/A					
	N/A		N/A									

<sup>1</sup> The rail transit agency must provide FTA with the necessary evidence (e.g. maintenance work order system records, photos, documentation, records, data, or other evidence) to close out the Remedial Action. Closeout of Remedial Actions may also be subject to ongoing FTA verification inspections to ensure corrections are sufficient and effective.

Inspector in Charge - Signature	<b>ANGELA M DLUGER</b>		Digitally signed by ANGELA M DLUGER DN: c=US, o=U.S. Government, ou=FTA HQ, ou=DOT Headquarters, cn=ANGELA M DLUGER Date: 2017.02.13 14:24:18 -05'00'	Date <b>February 13, 2017</b>
Inspector in Charge – Name Angela Dluger	Inspection Team Tamara Powell			



Description	<p>An FWSO inspector conducted an observation at the Rail Operations Control Center (ROCC) of the rail traffic controllers (RTC) on the afternoon shift at the Ops 1 console, which controls and over-see operations on the Red Line. The FWSO inspector performed an observation and compliance check that focused mainly on ROCC required actions and radio usage and operation (General Rules, #1.69 – 1.88 and Permanent Order T-16-10). The observation and compliance check was based on findings from the Safety Management Inspection (SMI) report (both open and closed findings), as well as rules from the MetroRail Safety Rules &amp; Procedures Handbook, and from procedures and rules from the Roadway Protection Manual (2014) and Level IV RWP Training Course.</p> <p>Observations related to SMI report findings:</p> <ul style="list-style-type: none"><li>• Finding R-3: <i>“RTCs receive limited refresher training and no road days.”</i></li><li>• R-1-3-a: <i>“WMATA must establish a program to provide each RTC with mandatory road days for territory familiarization and to keep up with changing system elements.”</i></li><li>• R-1-3-b: <i>“WMATA must require all RTCs to obtain and maintain Level 4 Roadway Worker Protection training and certification.”</i><ul style="list-style-type: none"><li>○ The FWSO inspector observed the radio transmissions and performance of two RTCs. RTC #2 has had Bridge Training (refresher course), and both RTCs are RWP Level 4 qualified and trained.</li><li>○ RTC #1, the Button Controller, has been employed at WMATA for 12 years, with 1 years in the ROCC.</li><li>○ RTC #2, the Radio Controller, was an external hire with military air traffic controller experience and has 3 years at WMATA in the ROCC.</li></ul></li><li>• R-1-4-b: <i>“Until such time as electronic records of train movement are readily available to on-duty Rail Traffic Controllers, WMATA must ensure that its RTCs maintain a paper-based record of all mainline train movements, signal bypasses, and unusual movements.”</i><ul style="list-style-type: none"><li>○ FWSO inspector reviewed the “daily activity log” on the console for the day’s anomalies, which included power breakers that would not close, CBEMIS alarm light inoperable, and operations issues (speed restrictions due to defective ties, missing clips, etc.).</li></ul></li><li>• R-1-6-a: <i>“WMATA must establish and enforce a proper protocol for language and terminology that is used over the radio – to include 100 percent word-for-word read-back for safety-related instructions and unusual train movements.”</i><ul style="list-style-type: none"><li>○ Starting at 1500 hours (beginning of observation period), RTC #2 made hourly announcements about the Roadway Worker Protection (RWP) protect list and all other operating conditions and anomalies for the Red Line. The announcement for the Red Line included speed restrictions, protocol for loss of speed commands, elevator and escalator outages, RWP protect list, areas where couplers were turned (slow speed areas), speed adherence reminder, and repeat-back requirements.</li><li>○ All personnel and units performed word-for-word confirmation of walking rights on the right-of-way (ROW). The RTC closed out each radio check transmission by acknowledging, “That’s a good copy.”</li><li>○ RTC also communicated full understanding of transmission over the radio and provided 100% repeat-back for all requests.</li><li>○ For each communication loop, RTC #2 closed out each transmission with “over” until she closed the loop with “Central out.”</li></ul></li></ul> <p>There were no exceptions noted during this observation.</p>	Number of Defects	0
		Recommended Finding?	No
		Remedial Action Required?	No
		Recommended Reinspection?	No
Remedial Action	N/A		



# Inspection Form

FOIA Exemption: All (b)(6)

Form FTA-IR-1

United States Department of Transportation  
Federal Transit Administration

## Agency/Department Information

Inspection Date	YYYY	MM	DD	Report Number	20170125-WMATA-AMD-3		
	2017	01	25				
Rail Agency Name	Washington Metropolitan Area Transit Authority			Rail Agency Department	POWR	Sub- Department	CM
Rail Agency Department Contact Information	Name		Email		Office Phone		Mobile Phone
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
Inspection Location	A04 – Woodley Park – Tie Breaker (TB)						

## Inspection Summary

Inspection Activity #	1	2	3	4	5	6
Activity Code	TP-RM-OBS					
Inspection Units	1					
Inspection Subunits	1					
Defects (Number)	0					
Recommended Finding	No					
Remedial Action Required <sup>1</sup>	No					
Recommended Reinspection	Yes					

## Activity Summaries

Inspection Activity #	1	Inspection Subject	A04 – Woodley Park – Tie Breaker House – Gap Feeder Breaker “open/close” mechanism not working correctly				Activity Code	TP	RM	OBS	
Job Briefing Employee Name/Title	N/A		Accompanied Inspector?	Yes	Out Brief Conducted	Yes	Time	1000-1400	Outside Shift	No	
Related Reports			Related CAPS / Findings								
Related Rules, SOPs, Standards, or Other	Ref	Rule or SOP		Standard		Other / Title		Checklist Reference			
	PMI - Whipp and Bourne 750V DC Type MM74 Circuit Breaker 365 Day Inspection (Rev 3, June, 20, 2013)					Whipp and Bourne (1975) Limited; Type MM74 Switchgear Operation and Maintenance Instructions;					
						Whipp and Bourne DC Schematic					
Inspection Location	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	Track Type	At-grade	Tunnel	Elevated	N/A
			X								
Line(s)	A-Line	Track Number	N/A	Chain Marker and/or Station(s)		From		To			
						A04 – Woodley Park		A04 – Woodley Park			
Vehicles	Head Car Number		Number of Cars		Equipment	Gap Feeder Breaker					

<sup>1</sup> The rail transit agency must provide FTA with the necessary evidence (e.g. maintenance work order system records, photos, documentation, records, data, or other evidence) to close out the Remedial Action. Closeout of Remedial Actions may also be subject to ongoing FTA verification inspections to ensure corrections are sufficient and effective.

Inspector in Charge - Signature	ANGELA M DLUGER		Digitally signed by ANGELA M DLUGER DN: c=US, o=U.S. Government, ou=FTA HQ, ou=DOT Headquarters, cn=ANGELA M DLUGER Date: 2017.02.07 16:30:58 -05'00'	Date February 7, 2017
Inspector in Charge – Name Angela Dluger	Inspection Team Tino Sahoo			



United States Department of Transportation  
Federal Transit Administration

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	N/A	N/A		
Description	<p>A job safety briefing outlining any safety hazards and work to be performed was done by WMATA CM Power Supervisor and electricians prior to arriving at job site.</p> <p>The DC gap feeder breaker (E-A04-45) in the Tie Breaker at A04-Woodley park was not operating correctly. The “open/close” or tripping/closing mechanism of the circuit breaker had a problem. The undervoltage coil of the gap feeder breaker was replaced because this piece of equipment was the problem, as troubleshooting had identified earlier on. The mechanical main latch, undervoltage release, and time-delay switch were adjusted accordingly to match the proper tolerances required as shown in the diagrams (+/- 0.5mm of the actual distance stated) in the Whipp and Bourne PMI and operations manual. The gap feeder breaker was tested using the test cabinet and was operational.</p> <p>The gap feeder breaker was “racked in” to the cubicle in the DC SWGR and put into service. The gap feeder breaker feeds a kicker rail, or 3<sup>rd</sup> rail.</p> <p>No issues or concerns were noted.</p>	Number of Defects		0
		Recommended Finding?		No
		Remedial Action Required?		No
		Recommended Reinspection?		No
Remedial Action	N/A			



# Inspection Form

FOIA Exemption: All (b)(6)

Form FTA-IR-1

United States Department of Transportation  
Federal Transit Administration

## Agency/Department Information

Inspection Date	YYYY	MM	DD	Report Number	20170125-WMATA-CB-1		
	2017	01	25				
Rail Agency Name	Washington Metropolitan Area Transit Authority			Rail Agency Department	TRST	Sub- Department	TKIN
Rail Agency Department Contact Information	Name			Email		Office Phone	
	[REDACTED]			[REDACTED]		[REDACTED]	
	[REDACTED]			[REDACTED]		[REDACTED]	
	[REDACTED]			[REDACTED]		[REDACTED]	
	[REDACTED]			[REDACTED]		[REDACTED]	
	[REDACTED]			[REDACTED]		[REDACTED]	
Inspection Location	Yellow/Blue Line between Franconia-Springfield and Van Dorn St						

## Inspection Summary

Inspection Activity #	1	2	3	4	5	6
Activity Code	TRK-JSB-OBS	TRK-WI-PI				
Inspection Units	1	1				
Inspection Subunits	0	1				
Defects (Number)	0	1				
Recommended Finding	No	No				
Remedial Action Required <sup>1</sup>	No	Yes				
Recommended Reinspection	No	Yes				

## Activity Summaries

Inspection Activity #	1	Inspection Subject				Job Safety Briefing			Activity Code		TRK	JSB	OBS
Job Briefing Employee Name/Title	TRST 626				Accompanied Inspector?	Yes	Out Brief Conducted	No	Time	1000-1300	Outside Shift	No	
Related Reports	N/A				Related CAPS / Findings			No					
Related Rules, SOPs, Standards, or Other	Ref		Rule or SOP		Standard			Other / Title		Checklist Reference			
	RWPM												
	MSRPH												
Inspection Location	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	Track Type	At-grade	Tunnel	Elevated	N/A		
	X							X		X			
Line(s)	J	Track Number	2	Chain Marker and/or Station(s)			From		To				
							875+00		695+00				
Vehicles	Head Car Number		Number of Cars		Equipment			N/A					
	N/A		N/A										
Description	TRST 626 provided a comprehensive job safety briefing. The briefing included the								Number of Defects		0		

<sup>1</sup> The rail transit agency must provide FTA with the necessary evidence (e.g. maintenance work order system records, photos, documentation, records, data, or other evidence) to close out the Remedial Action. Closeout of Remedial Actions may also be subject to ongoing FTA verification inspections to ensure corrections are sufficient and effective.

Inspector in Charge - Signature	<b>CHAD DAVID BROSKI</b> <small>Digitally signed by CHAD DAVID BROSKI DN: c=US, o=U.S. Government, ou=FRA FRACHicagoll, ou=DOT FRACHicagoll, cn=CHAD DAVID BROSKI Date: 2017.01.26 15:40:23 -06'00'</small>	Date
Inspector in Charge - Name Chad Broski	Inspection Team Chad Broski	



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	work limits, the protection that would be used (Train Approach Warning with an Advanced Watchman/Lookout), hazards that would be encountered, and the required Personal Protective Equipment (PPE). TRST 626 also reviewed the Roadway Access Guide pertaining to the inspection limits. He then inspected the work group to ensure they had the necessary Personal Protection Equipment (PPE) and Roadway Worker Protection (RWP) training. He also required the work group to acknowledge understanding of the on-track safety procedures.							Recommended Finding?		No
								Remedial Action Required?		No
								Recommended Reinspection?		No
Remedial Action		N/A								

Inspection Activity #	2	Inspection Subject	Remedial Action Verification					Activity Code		TRK	WI	PI
Job Briefing Employee Name/Title	TRST 626		Accompanied Inspector?	Yes	Out Brief Conducted	Yes	Time	1000-1300	Outside Shift	No		
Related Reports	20160824-WMATA-RPM-1 20160910-WMATA-RPM-1 20161116-WMATA-AD-1		Related CAPS / Findings			No						
Related Rules, SOPs, Standards, or Other	Ref		Rule or SOP		Standard		Other / Title		Checklist Reference			
	RWPM				TRST 1000		Permanent Order No. T-16-07, Rev. 1					
	MSRPH											
Inspection Location	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	Track Type	At-grade	Tunnel	Elevated	N/A	
	X							X		X		
Line(s)	J	Track Number	2	Chain Marker and/or Station(s)			From		To			
							875+00		695+00			
Vehicles	Head Car Number		Number of Cars		Equipment		N/A					
	N/A		N/A									
Description	<p>The FWSO inspector performed remedial action verifications between chain markers (CM) 875+00 and 695+00 on main track J2.</p> <p>Observations:</p> <ul style="list-style-type: none"> <li>The on-track safety complied with the RWPM. Train Approach Warning Protection with an Advanced Watchman/Lookout allowed ample time to clear for on-coming trains.</li> <li>A passing train failed to comply with Permanent Order No. T-16-07, Rev. 1. It passed the roadway work group at approximately 1227 hours on J2 at CM 731+00. SAFE 206, who was the assigned Watchman/Lookout, was informed of the non-compliance.</li> <li>FWSO remedial actions for ID #'s 951 and 1009 have not been repaired, replaced, and/or removed.</li> <li>FWSO noted that escort TRST 626, who was also conducting a hot spot verification to update the WMATA Roadway Access Guide, determined that there was enough clearance at the overhead bridge (CM 765+00) on both sides of the main tracks. This determination would eliminate remedial action ID # 938. TRST 626 will verify with WMATA prior to instructing removal of no clearance signs leading up to the bridge wall.</li> <li>FWSO noted that escort TRST 626 was assigned by WMATA to conduct a thorough walking hot spot verification throughout the system in order to update the WMATA Roadway Access Guide. This will close remedial action # 1008 when it is completed.</li> <li>FWSO noted multiple missing 3<sup>rd</sup> rail cover boards at the following chain markers: J2 814+50, J1 793+50, J2 782+00, J2 772+80, J2 762+00, J1 732+20, J1 730+80, J2 722+00, J2 705+20, J1 704+50, J1 701+50, &amp; J2 695+00.</li> <li>FWSO noted a track bond was detached at a joint on the overhead bridge at J2 CM 707+00.</li> </ul>							Number of Defects		1		
								Recommended Finding?		No		
								Remedial Action Required?		Yes		
								Recommended Reinspection?		Yes		
Remedial Action		<ul style="list-style-type: none"> <li>WMATA must repair or replace bond for joint on overhead bridge at J2 CM 707+00.</li> </ul>										



# Inspection Form

FOIA Exemption: All (b)(6)

Form FTA-IR-1

United States Department of Transportation  
Federal Transit Administration

**Agency/Department Information**

Inspection Date	YYYY	MM	DD	Report Number	20170125-WMATA-WP-1		
	2017	01	25				
Rail Agency Name	Washington Metropolitan Area Transit Authority			Rail Agency Department	TRST	Sub- Department	Maintenance
Rail Agency Department Contact Information	Name		Email		Office Phone		Mobile Phone
	[REDACTED]		[REDACTED]				
	[REDACTED]		[REDACTED]				
	[REDACTED]		[REDACTED]				
Inspection Location	A Line, track 2, between CM 283+00 and Tenleytown-AU						

**Inspection Summary**

Inspection Activity #	1	2	3	4	5	6
Activity Code	TRK-RWP-OBS	TRK-GEN-INS				
Inspection Units	1	1				
Inspection Subunits	5	8				
Defects (Number)	0	5				
Recommended Finding	No	Yes				
Remedial Action Required <sup>1</sup>	No	Yes				
Recommended Reinspection	No	Yes				

**Activity Summaries**

Inspection Activity #	1	Inspection Subject					Roadway Worker Protection – Job Safety Briefing			Activity Code		TRK	RWP	OBS
Job Briefing Employee Name/Title	TRST 6168, RWIC TRST 6041, Watchman/Lookout					Accompanied Inspector?	Yes	Out Brief Conducted	Yes	Time	1130 1330	Outside Shift	No	
Related Reports						Related CAPS / Findings								
Related Rules, SOPs, Standards, or Other	Ref		Rule or SOP			Standard			Other / Title		Checklist Reference			
	RWPM													
Inspection Location	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	Track Type	At-grade	Tunnel	Elevated	N/A			
	X								X					
Line(s)	A Line		Track Number	2	Chain Marker and/or Station(s)		From		To					
							A-07		A-08					
Vehicles	Head Car Number		Number of Cars			Equipment	N/A							
	N/A		N/A											
Description	The briefing was provided by TRST 664 at Bethesda Station. The briefing was thorough and fully compliant with WMATA requirements. It included WMATA level 1 ID check, the type of protection in place (train approach warning, or TAW), and							Number of Defects		0				
								Recommended Finding?		No				
								Remedial Action Required?		No				

<sup>1</sup> The rail transit agency must provide FTA with the necessary evidence (e.g. maintenance work order system records, photos, documentation, records, data, or other evidence) to close out the Remedial Action. Closeout of Remedial Actions may also be subject to ongoing FTA verification inspections to ensure corrections are sufficient and effective.

Inspector in Charge - Signature <b>WINSLOW L. POWELL</b> <small>Digitally signed by WINSLOW L. POWELL DN: cn=US, o=U.S. Government, ou=DOT Headquarters, ou=FTAHQ, cn=WINSLOW L. POWELL Date: 2017.01.27 11:22:03 -05'00'</small>		Date
Inspector in Charge – Name Winslow Powell	Inspection Team Alexander Nepa	





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	the potential hazards and hot spots. No exceptions were taken with the job safety briefing.	Recommended Reinspection?	No
Remedial Action			

Inspection Activity #	2	Inspection Subject	Track General Inspection				Activity Code	TRK	GEN	INS						
Job Briefing Employee Name/Title	TRST 6168, RWIC TRST 6014 Watchman/Lookout		Accompanied Inspector?	Yes	Out Brief Conducted	Yes	Time	1130 1330	Outside Shift	No						
Related Reports	Related CAPS / Findings															
Related Rules, SOPs, Standards, or Other	Ref	Rule or SOP		Standard		Other / Title		Checklist Reference								
	TRST 1000															
Inspection Location	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	Track Type	At-grade	Tunnel	Elevated	N/A					
	X								X							
Line(s)	A Line	Track Number	2	Chain Marker and/or Station(s)	From			To								
					A-07			A-08								
Vehicles	Head Car Number		Number of Cars		Equipment	N/A										
	N/A		N/A													
Description	<p>An inspection of the A Line, track 2, from CM 283+00 to CM 264+00 (Tenleytown-AU) was conducted. The FWSO inspector, WMATA personnel, and 3<sup>rd</sup> party contractors from Harsco were present for the inspection. The FWSO inspector performed the assessment using WMATA TRST 1000, dated January 1, 2015, Revision 6. Harsco inspectors performed their assessment using a newly revised, non-distributed version of the TRST 1000. As a result, the two reports may have inconsistent findings. The following concerns were observed:</p> <ul style="list-style-type: none"> <li>The lighting in the tunnel between CM 285+00 and CM 270+00 on track two is poor resulting from burnt out bulbs and dirty lenses. (TRST 1000, 10.15)</li> <li>Between CM 280+00 and 278+00 on track 2, standing water is not draining as designed. (TRST 1000, 3.2.2.2)</li> <li>Between CM 270+00 and CM 264+00 standing water is not draining as designed. (TRST 100, 3.2.2.2)</li> <li>At CM 270+80, left side on the side wall of the tunnel, there is a leak allowing for standing water. (TRST 1000, 3.2.2.4)</li> <li>At CM 270+00 to 270+40, right rail, there are eight (8) defective fasteners in a row, 276 inches between non-defective holding fasteners. (TRST 1000, 7.7)</li> <li>At CM 265+30, right rail, there are three (3) defective fasteners in a row, 119 inches between non-defective holding fasteners. (TRST 1000, 7.7)</li> <li>ETS box number A74, A07 TP 34, A08 TB 44-46 telephone is not working. (TRST 1000, 10.14)</li> <li>There is a relay rail lying between the running rail and the safety walkway, creating a trip and fall hazard. (TRST 1000, 10.17.4.1)</li> </ul> <p>Note: Harsco inspectors identified yellow condition fastener defects that were less than the minimum 90 inches as required in TRST 1000, dated January 1, 2015, Revision 6. They were not noted as defects in this report.</p>						Number of Defects		5							
							Recommended Finding?		Yes							
							Remedial Action Required?		Yes							
							Recommended Reinspection?		Yes							
Remedial Action	<ul style="list-style-type: none"> <li>At CM 270+80, WMATA must repair the leak on the left side wall of the tunnel.</li> <li>At CM 270+00 to 270+40, WMATA must repair the eight (8) defective fasteners.</li> <li>At CM 265+30, WMATA must repair the three (3) defective fasteners.</li> <li>WMATA must repair the ETS telephone box A74, A07 TP 34, A08 TB 44-46.</li> <li>WMATA must remove the relay rail lying between the running rail and the safety walkway.</li> </ul>															





# Inspection Form

FOIA Exemption: All (b)(6)

Form FTA-IR-1

United States Department of Transportation  
Federal Transit Administration

## Agency/Department Information

Inspection Date	YYYY	MM	DD	Report Number	20170126-WMATA-AD-1		
	2017	01	26				
Rail Agency Name	Washington Metropolitan Area Transit Authority			Rail Agency Department	TRST	Sub- Department	Maintenance
Rail Agency Department Contact Information	Name		Email		Office Phone		Mobile Phone
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
Inspection Location	A – Red line, track 2, between Tenleytown-AU and Van Ness-UDC						

## Inspection Summary

Inspection Activity #	1	2	3	4	5	6
Activity Code	TRK-RWP-OBS	TRK-GEN-INS				
Inspection Units	1	1				
Inspection Subunits	5	11				
Defects (Number)	0	7				
Recommended Finding	No	Yes				
Remedial Action Required <sup>1</sup>	No	Yes				
Recommended Reinspection	No	Yes				

## Activity Summaries

Inspection Activity #	1	Inspection Subject					Roadway Worker Protection – Job Safety Briefing			Activity Code		TRK	RWP	OBS
Job Briefing Employee Name/Title	TRST 6168, RWIC TRST 6198, Watchman/Lookout					Accompanied Inspector?	Yes	Out Brief Conducted	Yes	Time	1130 1330	Outside Shift	No	
Related Reports						Related CAPS / Findings								
Related Rules, SOPs, Standards, or Other	Ref		Rule or SOP			Standard			Other / Title		Checklist Reference			
	RWPM													
Inspection Location	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	Track Type	At-grade	Tunnel	Elevated	N/A			
	X								X					
Line(s)	A Line		Track Number	2	Chain Marker and/or Station(s)			From		To				
								A-07		A-06				
Vehicles	Head Car Number		Number of Cars			Equipment		N/A						
	N/A		N/A											
Description	The Job Safety Briefing was provided by TRST 6168 at Tenleytown Station. The briefing was thorough and compliant with WMATA requirements. It included WMATA level 1 ID check, the type of protection (Train Approach Warning, or TAW),								Number of Defects		0			
									Recommended Finding?		No			
									Remedial Action Required?		No			

<sup>1</sup> The rail transit agency must provide FTA with the necessary evidence (e.g. maintenance work order system records, photos, documentation, records, data, or other evidence) to close out the Remedial Action. Closeout of Remedial Actions may also be subject to ongoing FTA verification inspections to ensure corrections are sufficient and effective.

Inspector in Charge - Signature	AMBUR I DALEY		Digitally signed by AMBUR I DALEY DN: c=US, o=U.S. Government, ou=DOT Headquarters, ou=FMCSAHQ, cn=AMBUR I DALEY Date: 2017.02.07 08:51:47 -05'00'	Date
Inspector in Charge – Name Ambur Daley	Inspection Team Alejandro Nebra			



United States Department of Transportation  
Federal Transit Administration

Form FTA-IR-1

	and the potential hazards, hot spots, and hospital locations. No exceptions were taken with the briefing.	Recommended Reinspection?	No
Remedial Action	N/A		

Inspection Activity #	2	Inspection Subject	Track General Inspection					Activity Code	TRK	GEN	INS
Job Briefing Employee Name/Title	TRST 6168, RWIC TRST 6198 Watchman/Lookout		Accompanied Inspector?	Yes	Out Brief Conducted	Yes	Time	1030 1330	Outside Shift	No	
Related Reports	Related CAPS / Findings										
Related Rules, SOPs, Standards, or Other	Ref	Rule or SOP		Standard			Other / Title		Checklist Reference		
	TRST 1000										
Inspection Location	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	Track Type	At-grade	Tunnel	Elevated	N/A
	X								X		
Line(s)	A Line	Track Number	2	Chain Marker and/or Station(s)	From			To			
					A-07			A-06			
Vehicles	Head Car Number		Number of Cars		Equipment	N/A					
	N/A		N/A								

<p>An inspection of the A line, track 2, from (Tenleytown-AU) CM 255+00 to (Van Ness-UDC) CM 210+00 was conducted. The FWSO inspector, WMATA personnel, and 3<sup>rd</sup> party contractors from Harsco were present for the inspection. The FWSO inspector performed the assessment using WMATA TRST 1000, dated January 1, 2015, Revision 6. Harsco inspectors performed their assessment using a newly revised, non-distributed version of the TRST 1000. As a result, the two reports may have inconsistent findings. The following concerns were observed:</p> <ul style="list-style-type: none"> <li>Between CM 255+00 and CM 210+00 on track 2, the quality of lighting in the tunnel ranged from a total absence to extremely poor as a result of many burnt out bulbs and filthy lenses. (TRST 1000, 10.15)</li> <li>Between CM 255+00 and 245+00 on track 2, 3<sup>rd</sup> rail side in the ditch, standing water was not draining as designed. (TRST 1000, 3.2.2.2)</li> <li>At CM 216+00, a tunnel leak is allowing water to hit the left rail causing rusting and surface damage. (TRST 1000, 3.2.2.4)</li> <li>At CM 240+00 right rail, three (3) defective fasteners were observed in a row, 107 inches between non-defective holding fasteners. (TRST 1000, 7.7)</li> <li>At CM 237+00, three (3) defective fasteners were observed in a row, 112 inches between non-defective holding fasteners. (TRST 1000, 7.7)</li> <li>At CM 236+50, four (4) defective fasteners were observed in a row, 130 inches between non-defective holding fasteners. This condition allowed for 1/8 lateral movement. (TRST 1000, 7.7)</li> <li>At CM 234+30, four (4) defective fasteners were observed in a row, 151 inches between non-defective holding fasteners. (TRST 1000, 7.7)</li> <li>At CM 249+80 to CM 248+00, left rail in the curve, rail revealed a spalling condition. (TRST 1000, 5.11.7)</li> <li>At CM 233+00, jumper cables and connecting clamps were observed on the safety walkway, creating a trip and fall hazard. (TRST 1000, 10.17.4.1)</li> <li>At CM 212+00 angle bars, jumper wires and connecting clamps were observed on the safety walkway, creating a trip and fall hazard. (TRST 1000, 10.17.4.1)</li> <li>At CM 232+90, right rail at joint, there was a ¼ tread mismatch, creating a battered joint condition on one side. (TRST 1000, table 5-20)</li> </ul> <p>Note: Harsco inspectors identified yellow condition fastener defects that were less than the minimum 90 inches as required in TRST 1000, dated January 1, 2015, Revision 6. They were not noted as defects in this report.</p>	Number of Defects	7
	Recommended Finding?	Yes
	Remedial Action Required?	Yes
	Recommended Reinspection?	Yes



Remedial Action	<ul style="list-style-type: none"><li>• At CM 216+00, WMATA must repair the tunnel leak that is causing rusting and surface damage.</li><li>• At CM 240+00 right rail, WMATA must repair the three (3) defective fasteners.</li><li>• At CM 237+00, WMATA must repair the three (3) defective fasteners.</li><li>• At CM 236+50, WMATA must repair the four (4) defective fasteners.</li><li>• At CM 234+30, WMATA must repair the four (4) defective fasteners.</li><li>• At CM 233+00, WMATA must remove the jumper cables and connecting clamps (debris) that were observed on the safety walkway.</li><li>• At CM 212+00 WMATA must remove the angle bars, jumper wires, and connecting clamps (debris) were observed on the safety walkway.</li></ul>
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Photos:



Damage to running surface of rail from water

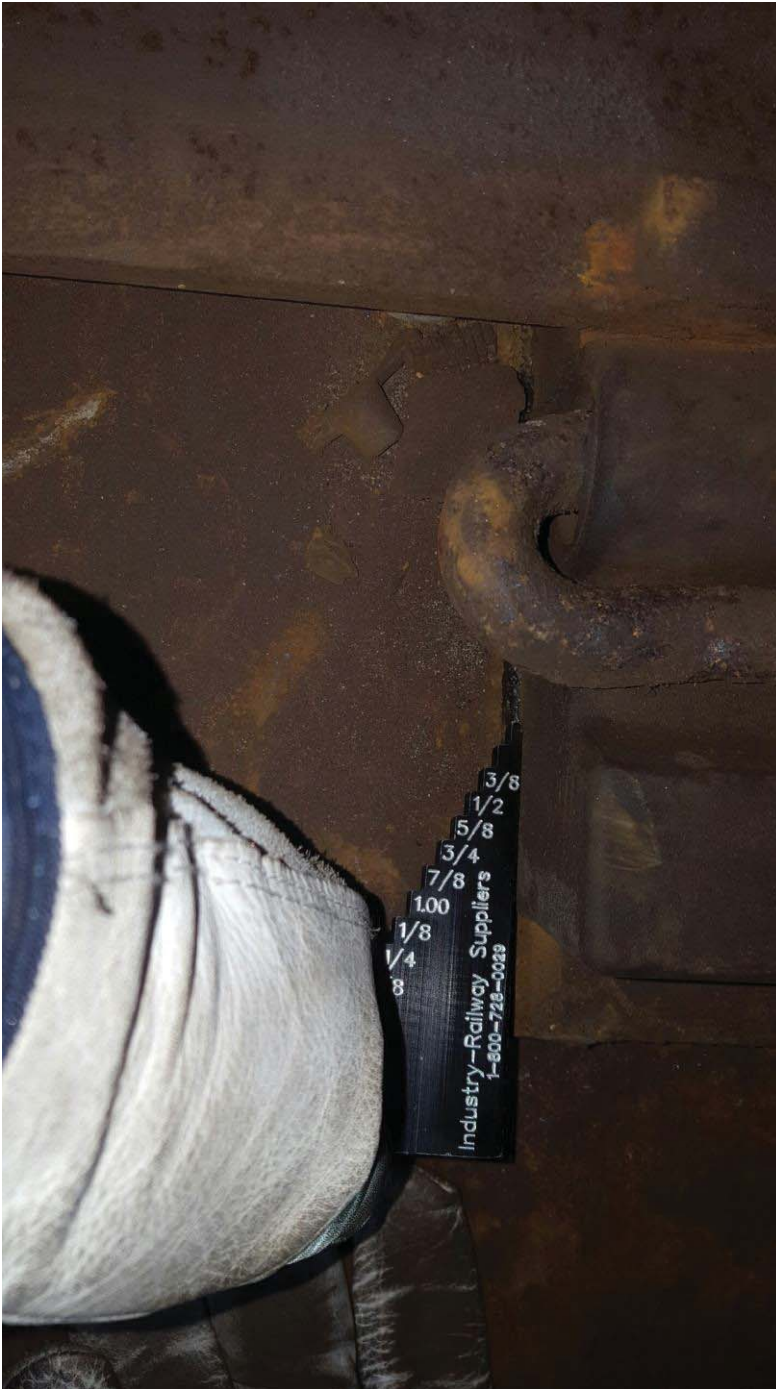




Crack in the side of tunnel allowing



Draining down side to field side of rail



Loose fasteners allowing 1/8-inch lateral plate movement





# Inspection Form

FOIA Exemption: All (b)(6) -

Form FTA-IR-1

United States Department of Transportation  
Federal Transit Administration

## Agency/Department Information

Inspection Date	YYYY	MM	DD	Report Number	20170126-WMATA-AD-2		
	2017	01	26				
Rail Agency Name	Washington Metropolitan Area Transit Authority			Rail Agency Department	TRST	Sub- Department	Structures
Rail Agency Department Contact Information	Name		Email		Office Phone		Mobile Phone
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
Inspection Location	Metro Center, Farragut North, and Dupont Circle Stations						

## Inspection Summary

Inspection Activity #	1	2	3	4	5	6
Activity Code	STR-WI-PI					
Inspection Units	1					
Inspection Subunits	3					
Defects (Number)	5					
Recommended Finding	Yes					
Remedial Action Required <sup>1</sup>	Yes					
Recommended Reinspection	Yes					

## Activity Summaries

Inspection Activity #	1	Inspection Subject					Walking Inspection of Handrails			Activity Code		STR	WI	PI
Job Briefing Employee Name/Title	N/A					Accompanied Inspector?	No	Out Brief Conducted	No	Time	1000-1100	Outside Shift	No	
Related Reports	N/A					Related CAPS / Findings		TOC-COL-15-002						
Related Rules, SOPs, Standards, or Other	Ref		Rule or SOP		Standard		Other / Title			Checklist Reference				
	MSRPH													
Inspection Location	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	Track Type	At-grade	Tunnel	Elevated	N/A			
			X						X					
Line(s)	N/A	Track Number	N/A	Chain Marker and/or Station(s)			From		To					
							Metro Center		DuPont Circle					
Vehicles	Head Car Number		Number of Cars		Equipment		N/A							
	N/A		N/A											
Description	FWSO inspector performed an inspection of handrail securement following WMATA's response to Corrective Action Plan (CAP) TOC-COL-15-002. This CAP was issued by TOC in response to a June 14, 2013, incident in which a train struck an object on the roadway resulting in a damaged ETS box, 3 <sup>rd</sup> rail heater box, and approximately \$500,000 damage to the underbodies of 3 rail cars. As a mitigation to prevent re-occurrence, WMATA indicated that they would perform repairs to all adverse conditions system-wide until complete.							Number of Defects		5				
								Recommended Finding?		No				
								Remedial Action Required?		No				
								Recommended Reinspection?		No				

<sup>1</sup> The rail transit agency must provide FTA with the necessary evidence (e.g. maintenance work order system records, photos, documentation, records, data, or other evidence) to close out the Remedial Action. Closeout of Remedial Actions may also be subject to ongoing FTA verification inspections to ensure corrections are sufficient and effective.

Inspector in Charge - Signature	<b>AMBUR I DALEY</b>	Digitally signed by AMBURI DALEY DN: c=US, o=U.S. Government, ou=DOT Headquarters, ou=FMCSAHQ, cn=AMBURI DALEY Date: 2017.02.03 14:21:13 -05'00'	Date
Inspector in Charge - Name	Ambur Daley	Inspection Team	Mike Vitale

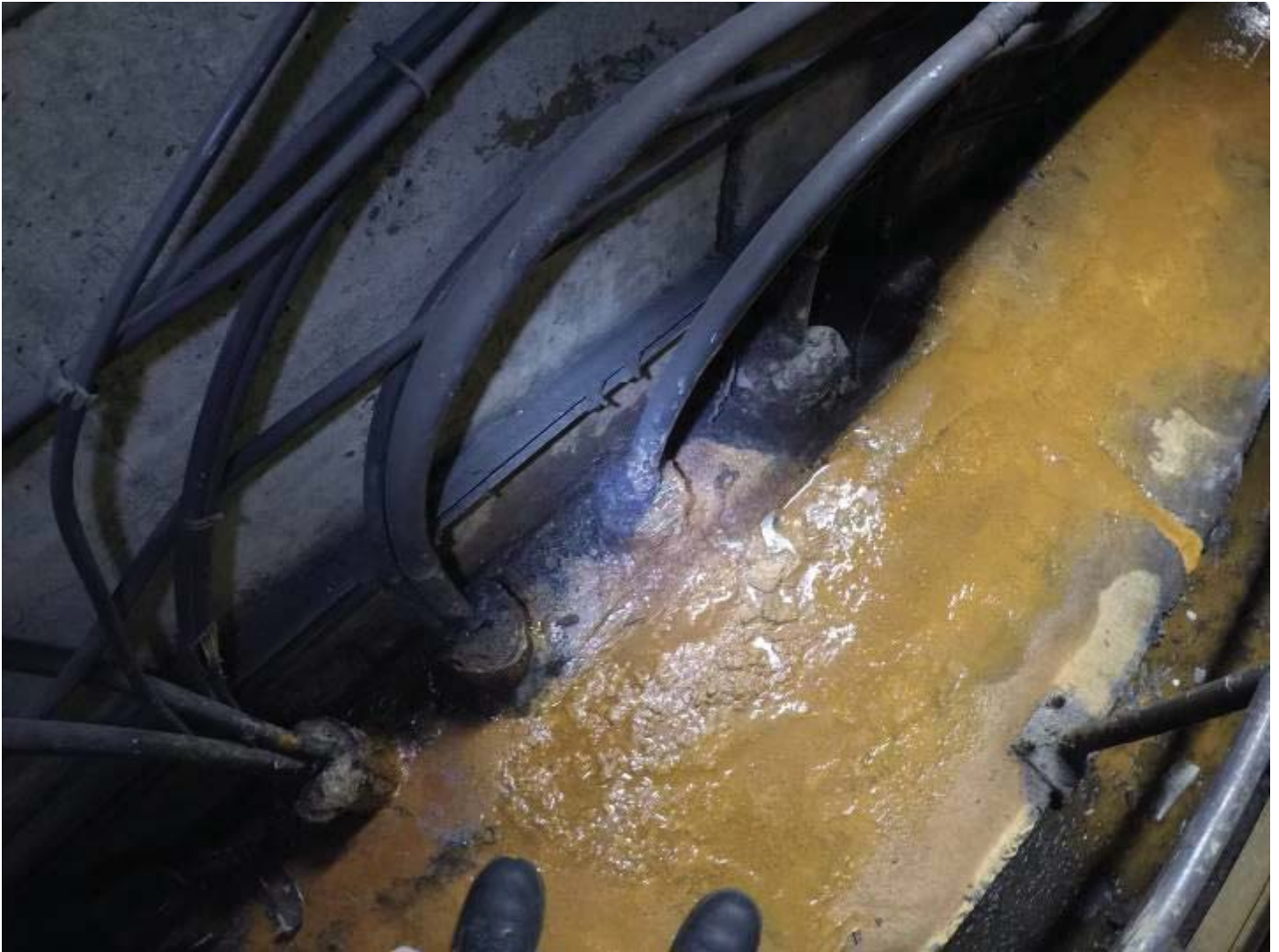


	<p>FWSO reviewed 10 locations listed in the submission where WMATA noted loose or bent handrails. Handrails on tracks A2, C1 and C2 portals at Metro Center were still loose, and the handrail at the C1 portal was still bent. Noted issues at Farragut North and Dupont Circle were addressed.</p> <p>Based on the findings, FWSO will issue a letter to WMATA rejecting the CAP submittal for TOC-COL-15-002 for completion of additional work.</p> <p>While inspecting the D1 portal, a significant water leak was found coming up from a piece of conduit in the safety walk and covering the safety walk with mud and water.</p>		
Remedial Action	WMATA must repair leak at D1 005+00		

Photos:



Damage from collision at C1 3+00



Water Leak at D1 5+00



# Inspection Form

FOIA Exemption: All (b)(6)

Form FTA-IR-1

United States Department of Transportation  
Federal Transit Administration

## Agency/Department Information

Inspection Date	YYYY	MM	DD	Report Number	20170126-WMATA-AD-3		
	2017	01	26				
Rail Agency Name	Washington Metropolitan Area Transit Authority			Rail Agency Department	TRST	Sub- Department	
Rail Agency Department Contact Information	Name		Email		Office Phone		Mobile Phone
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
Inspection Location	D line						


## Inspection Summary

Inspection Activity #	1	2	3	4	5	6
Activity Code	TRK-RWP-OBS	TRK-WI-OBS	TRK-WI-PI	TRK-WI-QAI		
Inspection Units	1	1	1	1		
Inspection Subunits	1	4	2	1		
Defects (Number)	0	3	2	0		
Recommended Finding	No	No	No	No		
Remedial Action Required <sup>1</sup>	No	No	Yes	No		
Recommended Reinspection	No	No	Yes	No		

## Activity Summaries

Inspection Activity #	1	Inspection Subject	Roadway Worker Protection				Activity Code	TRK	RWP	OBS	
Job Briefing Employee Name/Title	RWIC 642 Watchman/Lookout 6101		Accompanied Inspector?	Yes	Out Brief Conducted	No	Time	1000 to 1500	Outside Shift	No	
Related Reports	Related CAPS / Findings										
Related Rules, SOPs, Standards, or Other	Ref	Rule or SOP		Standard		Other / Title		Checklist Reference			
	RWPM										
Inspection Location	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	Track Type	At-grade	Tunnel	Elevated	N/A
	X							X	X		
Line(s)	D	Track Number	1	Chain Marker and/or Station(s)		From		To			
						228+00		216+00			
Vehicles	Head Car Number		Number of Cars		Equipment	N/A					
	N/A		N/A								
Description	The RWIC conducted a thorough job safety briefing and identified the Watchman/Lookout and how effective warning would be provided. The Roadway Worker Protection (RWP) would be Train Approach Warning (TAW). After authority							Number of Defects		0	
								Recommended Finding?		No	
								Remedial Action Required?		No	

<sup>1</sup> The rail transit agency must provide FTA with the necessary evidence (e.g. maintenance work order system records, photos, documentation, records, data, or other evidence) to close out the Remedial Action. Closeout of Remedial Actions may also be subject to ongoing FTA verification inspections to ensure corrections are sufficient and effective.

Inspector in Charge – Signature			Digitally signed by AMBUR I DALEY DN: c=US, o=U.S. Government, ou=DOT Headquarters, ou=FMCSAHQ, cn=AMBUR I DALEY Date: 2017.02.06 10:23:25 -05'00'	Date
Inspector in Charge – Name	Ambur Daley			
Inspection Team	Kevin McDonald			

Form FTA-IR-1

Version date: 8/26/16





United States Department of Transportation  
Federal Transit Administration

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	was granted from the Rail Operations Control Center (ROCC), the Watchman/Lookout used Individual Train Detection (ITD) to enter the track zone and established TAW.							<b>Recommended Re-inspection?</b>		No	
<b>Remedial Action</b>	N/A										

<b>Inspection Activity #</b>	2		<b>Inspection Subject</b>				Track Inspection observation			<b>Activity Code</b>		TRK	WI	OBS	
<b>Job Briefing Employee Name/Title</b>	RWIC 642 Watchman/Lookout 6101				<b>Accompanied Inspector?</b>	Yes		<b>Out Brief Conducted</b>	No	<b>Time</b>	1000 to 1500	<b>Outside Shift</b>	No		
<b>Related Reports</b>	20170118, 20170119, 20190125,				<b>Related CAPS / Findings</b>										
<b>Related Rules, SOPs, Standards, or Other</b>	Ref		Rule or SOP		Standard			Other / Title		Checklist Reference					
	MSRPH		Permanent Order T-16-07 revision 1												
	MSRPH		4.227 (d)												
<b>Inspection Location</b>	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	<b>Track Type</b>	At-grade	Tunnel	Elevated	N/A				
	X							X	X						
<b>Line(s)</b>	D	<b>Track Number</b>	1		<b>Chain Marker and/or Station(s)</b>		From		To						
							228+00		216+00						
<b>Vehicles</b>	Head Car Number		Number of Cars		<b>Equipment</b>		N/A								
	N/A		N/A												
<b>Description</b>	<p>The inspector observed three violations of Permanent Order T-16-07 rev. 1, section B, bullet point 4, which states that trains must "continue at 10 MPH until the entire train is past personnel." The last car of an 8 car WMATA train must not pass the work crew before 45 seconds have elapsed. However the following was observed:</p> <ul style="list-style-type: none"><li>At 1118 hours, an 8 car train outbound from Stadium Armory with head end car # 2043 approached work crew members on catwalk at 10 MPH then rapidly accelerated. The rear end car passed crew members within 35 seconds.</li><li>At 1310 hours, an 8 car train outbound from Stadium Armory with head end car # 5079 approached work crew members on catwalk at 10 MPH then rapidly accelerated. The rear end car passed crew members within 35 seconds.</li><li>At 1340 hours, an 8 car train outbound from Stadium Armory with head end car # 2043 approached work crew members on catwalk at 10 MPH then rapidly accelerated. The rear end car passed crew members within 25 seconds.</li></ul> <p>FTA has issued previous remedial actions concerning P.O. T-16-0-7 and continues to monitor compliance.</p>											<b>Number of Defects</b>		3	
												<b>Recommended Finding?</b>		Yes	
												<b>Remedial Action Required?</b>		No	
													<b>Recommended Re-inspection?</b>		No
<b>Remedial Action</b>	N/A														

<b>Inspection Activity #</b>	3		<b>Inspection Subject</b>				Track - physical inspection			<b>Activity Code</b>		TRK	WI	PI
<b>Job Briefing Employee Name/Title</b>	RWIC 642 Watchman/Lookout 6101				<b>Accompanied Inspector?</b>	Yes		<b>Out Brief Conducted</b>	No	<b>Time</b>	1000 to 1300	<b>Outside Shift</b>	No	
<b>Related Reports</b>					<b>Related CAPS / Findings</b>									
<b>Related Rules, SOPs, Standards, or Other</b>	Ref		Rule or SOP		Standard			Other / Title		Checklist Reference				
	TRST 1000		13.3.8; 5.11.7 & table 5.10											
<b>Inspection Location</b>	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	<b>Track Type</b>	At-grade	Tunnel	Elevated	N/A			
	X							X	X					
<b>Line(s)</b>	D	<b>Track</b>	1		<b>Chain Marker</b>		From		To					



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		<b>Number</b>		<b>and/or Station(s)</b>	228+00	216+00
<b>Vehicles</b>	Head Car Number	Number of Cars		<b>Equipment</b>	N/A	
	N/A	N/A				
<b>Description</b>	<p>The following issues were observed:</p> <ul style="list-style-type: none"> <li>227+30 cracked third rail grout pad, left rail (Figure 1)</li> <li>219+90 low rail spalling (right rail). Per TRST 1000 section 5.11.7 and table 5.10: "Spalling (Flaking): If a Track Supervisor or Track Walker determines that condition requires rail to be replaced: A: Limit speed to 5, 15, or 40 MPH. H: Replace Rail. If a Track Supervisor or Track Walker determines that condition does not require rail to be replaced: E: Limit speed to 40 MPH and schedule rail for grinding, welding, or replacement" (Figure 2)</li> </ul>				<b>Number of Defects</b>	2
					<b>Recommended Finding?</b>	No
					<b>Remedial Action Required?</b>	Yes
					<b>Recommended Re-inspection?</b>	Yes
<b>Remedial Action</b>	<ul style="list-style-type: none"> <li>Per TRST 1000 section 13.3.8, WMATA must replace grout pad at 227+30.</li> <li>WMATA must categorize and address the low rail spalling at 219+90.</li> </ul>					

<b>Inspection Activity #</b>	4	<b>Inspection Subject</b>	Track Inspection/Quality assessment of contract inspectors				<b>Activity Code</b>	TRK	WI	QAI	
<b>Job Briefing Employee Name/Title</b>	RWIC 642 Watchman/Lookout 6101		<b>Accompanied Inspector?</b>	Yes	<b>Out Brief Conducted</b>	No	<b>Time</b>	1000 to 1500	<b>Outside Shift</b>	No	
<b>Related Reports</b>			<b>Related CAPS / Findings</b>								
<b>Related Rules, SOPs, Standards, or Other</b>	Ref	Rule or SOP		Standard		Other / Title		Checklist Reference			
<b>Inspection Location</b>	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	<b>Track Type</b>	At-grade	Tunnel	Elevated	N/A
	X							X	X		
<b>Line(s)</b>	D	<b>Track Number</b>	1	<b>Chain Marker and/or Station(s)</b>		From		To			
						228+00		216+00			
<b>Vehicles</b>	Head Car Number	Number of Cars		<b>Equipment</b>	N/A						
	N/A	N/A									
<b>Description</b>	<p>The FWSO inspector observed contract inspectors performing required WMATA track inspections. Contract inspectors performed detailed turnout and switch inspections to include gauge, cross-level, guard face gauge, flange-way width and depth, fasteners, and surface and alignment. Contractors performed a thorough and comprehensive inspection.</p> <p>Contractors are limiting inspections to track, geometry, fasteners and not to operating practices. Contractors may be using or piloting the new draft TRST 1000, revision 7, which will be submitted to FWSO at the end of February.</p>						<b>Number of Defects</b>	0			
							<b>Recommended Finding?</b>	No			
							<b>Remedial Action Required?</b>	No			
							<b>Recommended Re-inspection?</b>	No			
<b>Remedial Action</b>	N/A										



Photos:



Figure 1: 227+30 cracked third rail grout pad, left rail.



Figure 2: 219+90 low rail spalling





# Inspection Form

FOIA Exemption: All (b)(6)

Form FTA-IR-1

United States Department of Transportation  
Federal Transit Administration

## Agency/Department Information m

Inspection Date m	YYYY f	MM f	DD f	Report Number m	20170126-WMATA-AD-4		
	2017 f	01 f	26 f				
Rail Agency Name m	Washington Metropolitan Area Transit Authority f			Rail Agency m Department f	POWR f	Sub- Department f	CBL IN. f
Rail Agency Department m Contact Information m	Name f		Email f		Of ice Phone f		Mobile Phone f
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
Inspection Location m	A Line f						


## Inspection Summary m

Inspection Activity # m	1 f	2 f	3 f	4 f	5 f	6 f
Activity Code m	TP-WI-OBS f	f	f	f	f	f
Inspection Units m	1 f	f	f	f	f	f
Inspection Subunits m	16 f	f	f	f	f	f
Defects (Number) m	5	f	f	f	f	f
Recom ended Finding m	Yes	f	f	f	f	f
Remedial Action Required <sup>1m</sup>	Yes	f	f	f	f	f
Recom ended Reinspection m	Yes	f	f	f	f	f

## Activity Summaries m

Inspection Activity # m	1 f	Inspection Subject m Walking Observation f					Activity Code f		TP f	Wiff	OBS f
Job Briefing m Employee m Name/Title m	WMATA RWIC f WMATA Watchman/Lookout f WMATA Documenter f			Accompanied m Inspector? f	Yes f	Out Brief m Conducted m	Yes f	Time f	1000- f 1400 f	Outside m Shift m	No f
Related Reports m	f			Related CAPS / Findings f		f					
Related Rules, SOPs, m Standards, or Other m	Ref f		Rule or SOP f		Standard f		Other / Title f		Checklist Reference f		
Inspection Location m	Main f Track f	Yard f	Station f	OCC f	RTA f Facility f	FTA f Of ice f	Track Type m	At-grade f	Tunnel f	Elevated f	N/A f
	X f	f	f	f	f	f		X f	X f	f	f
Line(s) m	A-Line f	Track m Number m	TRK 1 f	Chain Marker m and/or Station(s) m		From f		To f			
						A12 – White Flint- Track 1 f		A14 – Rockville – Track 1 f			
Vehicles m	Lead Car Number f		Number of Cars f		Equipment m		N/A f				
	N/A f		N/A f								
Description m	Daily cable inspections are part of the holistic approach WMATA has instituted to prevent cable fires and arcing incidents. On a typical day there are three different WMATA cable inspection crews that are active, and they include three f							Number of Defects m		5 f	
								Recom ended Finding? m		Yes f	
								Remedial Action Required? m		Yes f	

<sup>1</sup> The rail transit agency must provide FTA with the necessary evidence (e.g. maintenance work order system records, photos, documentation, records, data, or other evidence) to close out the Remedial Action. Closeout of Remedial Actions may also be subject to ongoing FTA verification inspections to ensure corrections are sufficient and effective. f

Inspector in Charge - Signature f			Digitally signed by AMBURI DALEY DN: c=US, o=U.S. Government, ou=DOT Headquarters, ou=FMCSAHQ, cn=AMBURI DALEY Date: 2017.02.07 19:34:35 -05'00'	Date f
Inspector in Charge – Name m Ambur Daley m	Inspection Team m Tino Sahoo m			



United States Department of Transportation  
Federal Transit Administration

Form FTA-IR-1

	<p>personnel—the Roadway Worker in Charge (RWIC), the Watchman/Lookout, and a documenter of issues in wayside power cable and/or connections. Each crew f inspects a dif erent portion of the mainline from 1000–1400 hours. The pictures f taken and issues noted are entered into a database that creates Maximo work f orders. f</p> <p>f</p> <p>As outlined below, the following issues with the power cables were noted by the f FWSO inspector and WMATA personnel during the course of the normal daily f cable inspection process. f</p> <p>f</p> <ul style="list-style-type: none"><li>• TRK 1 CM 658+00 – Debris and trash surrounding feeder cables and by 3<sup>rd</sup> f rail end approach; loose nut/bolt assembly on Kindorf strap f</li><li>• TRK 1 CM 681+00 – Feeder cables lying on the deck (ballast) f</li><li>• TRK 1 CM 693+00 – Feeder cables lying on the deck (ballast); heat shrink f and/or OZ Gedney bushing needs to be replaced on feeder cable stub-up f (See Figure 1) f</li><li>• TRK 1 CM 701+00 – Feeder cables lying on the deck (ballast) f</li><li>• TRK 1 CM 702+00 – OZ Gedney bushing needs to be replaced on feeder f cable stub-up; cables lying on the deck (ballast) (See Figure 2) f</li><li>• TRK 1 CM 704+00 – Heat shrink needs to be replaced on a feeder cable stub-f up; OZ Gedney bushing needs to be replaced on another feeder cable stub-f up; (See Figure 3) f</li><li>• TRK 1 CM 705+00 – Feeder cables lying on the deck (ballast) f</li><li>• TRK 1 CM 716+00 – Feeder cables lying on the deck (ballast); feeder cable f rubbing against an adjacent Kindorf strap bolt f</li><li>• TRK 1 CM 726+00 – Feeder cables lying on the deck (ballast) f</li><li>• TRK 1 CM 737+00 – Feeder cables buried in the ballast, should be elevated f of the ground with Kindorf and fiberglass standof s f</li><li>• TRK 1 CM 738+00 – Feeder cables lying on the deck (ballast) f</li><li>• TRK 1 CM 766+00 – 3rd rail post insulator supporting no 3rd rail was present f in the area, which could impede collector shoes or knock collector shoes off f train (See Figure 4) f</li><li>• TRK 1 CM 777+00 – 3<sup>rd</sup> Rail cover board broken; feeder cables lying on the f deck (ballast) f</li><li>• TRK 1 CM 787+00 – Feeder cables lying on the deck (ballast) f</li><li>• TRK 1 CM 788+00 – Feeder cable lying on the deck (ballast) f</li><li>• TRK 1 CM 800+00 – Feeder cable lying on wooden rail tie f</li></ul> <p>f</p> <p>Note: Cables lying on the deck are prone to the vibration of the trains moving f back and forth, which can cause premature degradation of the cables, especially f in the outdoor areas where cables are lying on ballast. f</p>	Recom ended Reinspection? m	Yes f
Remedial Action m	<ul style="list-style-type: none"><li>• At TRK 1 CM 693+00, WMATA must replace the heat shrink and/or OZ Gedney bushing on the feeder cable stub-up. f</li><li>• At TRK 1 CM 702+00, WMATA must replace the OZ Gedney bushing on feeder cable stub-up. f</li><li>• At TRK 1 CM 704+00, WMATA must replace the heat shrink on feeder cable stub-up. f</li><li>• At TRK 1 CM 704+00, WMATA must replace the OZ Gedney bushing on other feeder cable stub-up. f</li><li>• At TRK 1 CM 766+00, WMATA must remove the unused 3<sup>rd</sup> rail post insulator from track area. f</li></ul>		

f

f

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f



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f

f

FIGURE 1 - TRK 1 CM 693+00 – FEEDER CABLES LAYING ON THE DECK (BALLAST); HEAT SHRINK AND/OR OZGEDNEY BUSING NEEDS TO BE REPLACED ON FEEDER CABLE STUB-UP

f



f

FIGURE 2 - TRK 1 CM 702+00 – OZGEDNEY BUSING NEEDS TO BE REPLACED ON FEEDER CABLE STUB-UP; CABLES LAYING ON THE DECK (BALLAST)

f



FIGURE 3 - TRK 1 CM 704+00 – HEAT SHRINK NEEDS TO BE REPLACED ON A FEEDER CABLE STUB-UP; GEDNEY BUSHING NEEDS TO BE REPLACED ON ANOTHER FEEDER CABLE STUB-UP



FIGURE 4 - TRK 1 CM 766+00 – 3<sup>RD</sup> RAIL POST INSULATOR SUPPORTING THIRD RAIL AS END APPROACH MAY HAVE BEEN SHORTENED; REMOVE UNNECESSARY INSULATOR AS COULD IMPEDE COLLECTOR SHOES OR KNOCK COLLECTOR SHOES OFF TRACK





# Inspection Form

FOIA Exemption: All (b)(6)

Form FTA-IR-1

United States Department of Transportation  
Federal Transit Administration

## Agency/Department Information

Inspection Date	YYYY	MM	DD	Report Number	20170126-WMATA-CB-1		
	2017	01	26				
Rail Agency Name	Washington Metropolitan Area Transit Authority			Rail Agency Department	TRST	Sub- Department	TKIN
Rail Agency Department Contact Information	Name			Email		Office Phone	
	[REDACTED]			[REDACTED]		[REDACTED]	
	[REDACTED]			[REDACTED]		[REDACTED]	
	[REDACTED]			[REDACTED]		[REDACTED]	
	[REDACTED]			[REDACTED]		[REDACTED]	
	[REDACTED]			[REDACTED]		[REDACTED]	
Inspection Location	J Line, Track 2, Between Van Dorn St. and Alexandria Yard						

## Inspection Summary

Inspection Activity #	1	2	3	4	5	6
Activity Code	TRK-JSB-OBS	TRK-WI-PI				
Inspection Units	1	1				
Inspection Subunits	0	1				
Defects (Number)	0	3				
Recommended Finding	No	No				
Remedial Action Required <sup>1</sup>	No	Yes				
Recommended Reinspection	No	Yes				

## Activity Summaries

Inspection Activity #	1	Inspection Subject					Job Safety Briefing			Activity Code		TRK	JSB	OBS
Job Briefing Employee Name/Title	TRST 626					Accompanied Inspector?	Yes	Out Brief Conducted	Yes	Time	1000-1300	Outside Shift	No	
Related Reports	N/A					Related CAPS / Findings			N/A					
Related Rules, SOPs, Standards, or Other	Ref		Rule or SOP			Standard			Other / Title		Checklist Reference			
	RWPM													
	MSRPH													
Inspection Location	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	Track Type	At-grade	Tunnel	Elevated	N/A			
	X							X		X				
Line(s)	J	Track Number	2	Chain Marker and/or Station(s)			From		To					
							688+00		575+00					
Vehicles	Head Car Number		Number of Cars			Equipment	N/A							
	N/A		N/A											
Description	TRST 626 provided a comprehensive job safety briefing. The briefing included the									Number of Defects		0		

<sup>1</sup> The rail transit agency must provide FTA with the necessary evidence (e.g. maintenance work order system records, photos, documentation, records, data, or other evidence) to close out the Remedial Action. Closeout of Remedial Actions may also be subject to ongoing FTA verification inspections to ensure corrections are sufficient and effective.

Inspector in Charge - Signature	<b>CHAD DAVID BROSKI</b>	Digitally signed by CHAD DAVID BROSKI DN: c=US, o=U.S. Government, ou=FRA FRACicagolL, ou=DOT FRACicagolL, cn=CHAD DAVID BROSKI Date: 2017.01.30 09:26:03 -06'00'	Date
Inspector in Charge - Name	Chad Broski		
Inspection Team	Chad Broski		



United States Department of Transportation  
Federal Transit Administration

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	work limits, the protection that would be used (Train Approach Warning), hazards that would be encountered, and the required Personal Protective Equipment (PPE). TRST 626 also reviewed the Roadway Access Guide pertaining to our inspection limits. He then inspected the work group to ensure they had the necessary PPE and Roadway Worker Protection (RWP) training. He also required the work group to acknowledge understanding of the on-track safety procedures.							<b>Recommended Finding?</b>		No	
								<b>Remedial Action Required?</b>		No	
								<b>Recommended Reinspection?</b>		No	
<b>Remedial Action</b>		N/A									

<b>Inspection Activity #</b>	2		<b>Inspection Subject</b>					General Track Observations				<b>Activity Code</b>		TRK	WI	PI	
<b>Job Briefing Employee Name/Title</b>	TRST 626					<b>Accompanied Inspector?</b>		Yes		<b>Out Brief Conducted</b>		Yes		<b>Time</b>	1000-1300	<b>Outside Shift</b>	No
<b>Related Reports</b>	N/A					<b>Related CAPS / Findings</b>			N/A								
<b>Related Rules, SOPs, Standards, or Other</b>	Ref			Rule or SOP			Standard			Other / Title			Checklist Reference				
	RWPM						TRST 1000			Permanent Order No. T-16-07, Rev. 1							
	MSRPH																
<b>Inspection Location</b>	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	<b>Track Type</b>		At-grade	Tunnel	Elevated	N/A					
	X								X		X						
<b>Line(s)</b>	J	<b>Track Number</b>	2		<b>Chain Marker and/or Station(s)</b>		From			To							
	688+00						575+00										
<b>Vehicles</b>	Head Car Number		Number of Cars			<b>Equipment</b>		N/A									
	N/A		N/A														
<b>Description</b>	<p>The FWSO inspector performed general track observations between chain markers (CM) 688+00 and 575+00 on main track J2.</p> <p>Observations:</p> <ul style="list-style-type: none"> <li>The on-track safety complied with the RWPM. Train Approach Warning Protection with a designated Watchman/Lookout allowed ample time to clear for on-coming trains.</li> <li>All trains complied with Permanent Order No. T-16-07, Rev. 1.</li> <li>FWSO noted joint bond wires were detached at CM J2 657+00.</li> <li>FWSO noted a red condition at CM J2 632+60 on an aerial structure in which WMATA representative placed a 15 MPH speed restriction. Gauge measured 56 inches due to the rail not seated properly in the direct fixation fastener plates, and the distance between effective fasteners was 112 inches. There was a 1/2-inch vertical deflection (gap between base of rail and plate) that was contributing to loose and missing fasteners. There were multiple loose or missing fasteners in the general area due to the pumping action of the rails.</li> <li>FWSO noted multiple loose or missing fasteners at the other end of the same aerial structure described above at approximately CM J2 630+00 due to vertical deflection of the rails.</li> <li>FWSO noted four (4) missing Pandrol e-Clips on wood crossties with one (1) effective fastener evenly breaking the cluster (less than 90 inches between non defective fasteners) located on the field side of the low rail in a curve at CM J2 618+90.</li> <li>FWSO noted multiple long sections of rail laying along the track roadbed between CM J2 630+00 – CM J2 610+00.</li> <li>FWSO noted numerous missing 3<sup>rd</sup> rail cover boards for both main tracks between CM 681+00 and CM 576+00.</li> </ul>							<b>Number of Defects</b>			3						
								<b>Recommended Finding?</b>			No						
								<b>Remedial Action Required?</b>			Yes						
								<b>Recommended Reinspection?</b>			Yes						
<b>Remedial Action</b>	<ul style="list-style-type: none"> <li>WMATA must repair the direct fixation fasteners on both ends of the aerial structure between approximately CM J2 630+00 and CM J2 633+00.</li> <li>WMATA must repair the broken bond wires for the joint at CM J2 657+00.</li> <li>WMATA must replace the missing Pandrol e-Clips on the field side of the low rail in a curve at CM J2 618+90.</li> </ul>																



# Inspection Form

FOIA Exemption: All (b)(6)

Form FTA-IR-1

United States Department of Transportation  
Federal Transit Administration**Agency/Department Information**

Inspection Date	YYYY	MM	DD	Report Number	20170128-WMATA-AD-1		
	2017	01	28				
Rail Agency Name	Washington Metropolitan Area Transit Authority			Rail Agency Department	TRST	Sub- Department	Compliance
Rail Agency Department Contact Information	Name		Email		Office Phone		Mobile Phone
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
Inspection Location	West Falls Church (K06) to Vienna (K08)						

**Inspection Summary**

Inspection Activity #	1	2	3	4	5	6
Activity Code	TRK-RWP-OBS	TRK-GEN-OBS	OPS-RC-OBS			
Inspection Units	1	1	1			
Inspection Subunits	2	2	10			
Defects (Number)	0	3	0			
Recommended Finding	No	No	No			
Remedial Action Required <sup>1</sup>	No	Yes	No			
Recommended Reinspection	No	Yes	No			

**Activity Summaries**

Inspection Activity #	1	Inspection Subject	Roadway Worker Protection – Job Safety Briefing and Field Implementation				Activity Code	TRK	RWP	OBS	
Job Briefing Employee Name/Title	RWIC #630 Escorts #679 and #601		Accompanied Inspector?	Y	Out Brief Conducted	Y	Time	0800 – 1400	Outside Shift	Yes	
Related Reports	20160410-WMATA-WHW-1, 20161031-WMATA-AD-1, 20160814-WMATA-RPM-1, 20160812-WMATA-RPM-1, 20160411-WMATA-NAV-1		Related CAPS / Findings								
Related Rules, SOPs, Standards, or Other	Ref		Rule or SOP		Standard		Other / Title		Checklist Reference		
	MSRPH		RWP								
	RWPM		General								
Inspection Location	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	Track Type	At-grade	Tunnel	Elevated	N/A
	X							X			
Line(s)	K-Line	Track Number	1&2	Chain Marker and/or Station(s)	From			To			
					K1 CM514+00 K2 CM690+00			K1 CM690+00 K2 CM514+00			
Vehicles	Head Car Number		Number of Cars		Equipment		N/A				

<sup>1</sup> The rail transit agency must provide FTA with the necessary evidence (e.g. maintenance work order system records, photos, documentation, records, data, or other evidence) to close out the Remedial Action. Closeout of Remedial Actions may also be subject to ongoing FTA verification inspections to ensure corrections are sufficient and effective.

Inspector in Charge - Signature	<b>AMBUR I DALEY</b>		Digitally signed by AMBUR I DALEY DN: c=US, o=U.S. Government, ou=DOT Headquarters, ou=FMCSAHQ, cn=AMBUR I DALEY Date: 2017.02.06 09:36:20 -05'00'	Date
Inspector in Charge – Name Ambur Daley	Inspection Team Robert Maniuszko			

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Version date: 8/26/16





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	N/A	N/A			
Description	<p>The job safety briefing was conducted by Unit 630, and no exceptions were taken.</p> <ul style="list-style-type: none"> <li>A review of the RWPM was performed. The area of the walk included one area with a curve restricted view and an overall safety note pertaining to "Hearing Cautions" due to the proximity of Rt. 66 on both sides of the roadway.</li> <li>The team included two escorts, Unit #679 and Unit #601.</li> <li>MSRPH rule of the day was to ensure that any cables that were to be cut were secured to prevent them from falling.</li> <li>The RWP rule of the day was 3.11. The rule stated that if Rail Operations Control Center (ROCC) communication was lost that you had to immediately clear the roadway.</li> <li>Crew used Train Approach Warning (TAW) with an Advanced Watchman if needed.</li> <li>The fence line was an area to clear. One section required clearing to a center catwalk.</li> <li>Hazards were discussed.</li> <li>ID's and personal protective equipment (PPE) were checked.</li> <li>The briefing form was signed by all.</li> </ul> <p>Field Implementation:</p> <ul style="list-style-type: none"> <li>During our walk the crew discovered an expansion joint cable that required repair. The team reported the condition to ROCC and Maintenance Operations Control (MOC). Single tracking was established during this time and a red tag was issued. The RWIC re-briefed the group as per the changes prior to the single track and as the single track was lifted.</li> <li>Adequate warning was always provided to clear without any need for urgent movement.</li> </ul>			Number of Defects	0
				Recommended Finding?	No
				Remedial Action Required?	No
				Recommended Reinspection?	No
Remedial Action	N/A				

Inspection Activity #	2	Inspection Subject	Roadway General Observations and Remedial Action Follow-ups				Activity Code	TRK	GEN	OBS	
Job Briefing Employee Name/Title	RWIC #630 Escorts #679 and #601		Accompanied Inspector?	Y	Out Brief Conducted	Y	Time	0800 – 1400	Outside Shift	Yes	
Related Reports	20160410-WMATA-WHW-1, 20161031-WMATA-AD-1, 20160814-WMATA-RPM-1, 20160812-WMATA-RPM-1, 20160411-WMATA-NAV-1		Related CAPS / Findings								
Related Rules, SOPs, Standards, or Other	Ref		Rule or SOP		Standard		Other / Title		Checklist Reference		
	MSRPH		General								
	TRST 1000		General								
Inspection Location	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	Track Type	At-grade	Tunnel	Elevated	N/A
	X							X			
Line(s)	K-Line	Track Number	1&2	Chain Marker and/or Station(s)	From		To				
					K1 CM514+00 K2 CM690+00		K1 CM690+00 K2 CM514+00				
Vehicles	Head Car Number		Number of Cars		Equipment	N/A					
	N/A		N/A								
Description	<p>General Observations: (Follow-up is necessary)</p> <p>1. At K1 CM588+80 the team observed a third rail expansion joint jumper that had dislodged from the third rail at the weld. The cable was lying under the third rail with an exposed end. The RWIC reported the condition to ROCC and MOC. While the team was out, single tracking was established and a red tag was issued to allow for repairs. The repairs were completed. (This item is Closed)</p>						Number of Defects	3			
							Recommended Finding?	No			
							Remedial Action Required?	Yes			
							Recommended Reinspection?	Yes			



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	<ol style="list-style-type: none"><li>2. From K1 CM632+00 to K1 CM632+60 the third rail cover is knocked off and the third rail is angled. The team observed numerous third rail contact shoes lying on the ground in the area. This area requires follow-up.</li><li>3. At K2 CM568+00 there is a third rail crossover bond cable that is capped but lying against the retaining wall. The cable should be properly terminated.</li><li>4. At K2 CM547+50 the negative return cable has a gouge in it that exposes the inner conductor. This exposed conductor should be repaired.</li></ol> <p>Remedial Action verification: The following remedial actions were found to be completed with no further follow-up necessary. These are now considered closed.</p> <ol style="list-style-type: none"><li>1. 449</li><li>2. 451</li><li>3. 450</li><li>4. 453</li><li>5. 452</li><li>6. 922</li><li>7. 920</li><li>8. 222</li><li>9. 221</li><li>10. 919</li><li>11. 216</li></ol> <p>The following remedial actions were found to be incomplete:</p> <ol style="list-style-type: none"><li>1. 1002 – The third rail heater tape fuse boxes are still lying on the ground with exposed wires. They are in a state of disrepair.</li><li>2. 917 – The ETS box had a new door installed. However, there was no map on the door and the wiring junction box below was missing the cover. The wires and power supply were exposed. The latch was also missing.</li><li>3. 218 – Two of three of the insulators are still cracked at the base.</li><li>4. 1001 – The return cable is still covered with a heavy application of electrical tape. Power needs to install the proper type of splice cover.</li><li>5. 921 – The box has a new latching cover but there is no map installed within.</li><li>6. 918 – The box has a new cover. However, the wiring junction box is fully exposed to the elements.</li></ol>		
<b>Remedial Action</b>	<p>WMATA should address the three items below as indicated:</p> <ol style="list-style-type: none"><li>1. From K1 CM632+00 to K1 CM632+60 the third rail cover is knocked off and the third rail is angled. The team observed numerous third rail contact shoes lying on the ground in the area. This area requires follow-up.</li><li>2. At K2 CM568+00 there is a third rail crossover bond cable that is capped but lying against the retaining wall. The cable should be properly terminated.</li><li>3. At K2 CM547+50 the negative return cable has a gouge in it that exposes the inner conductor. This exposed conductor should be repaired.</li></ol> <p>WMATA should also complete the required remedial actions on the following items. Please note these were previously reported and still remain open.</p> <ol style="list-style-type: none"><li>1. 1002 – The third rail heater tape fuse boxes are still lying on the ground with exposed wires. They are in a state of disrepair.</li><li>2. 917 – The ETS box had a new door installed however there was no map on the door and the wiring junction box below was missing the cover. The wires and power supply were exposed. The latch was also missing.</li><li>3. 218 – Two of three of the insulators are still cracked at the base.</li><li>4. 1001 – the return cable is still covered with a heavy application of electrical tape. Power needs to install the proper type of splice cover.</li><li>5. 921 – The box has a new latching cover but there is no map installed within.</li><li>6. 918 – The box has a new cover however the wiring junction box is fully exposed to the elements.</li></ol>		

<b>Inspection Activity #</b>	3	<b>Inspection Subject</b>	Permanent Order T-16-07 Observations			<b>Activity Code</b>		OPS	RC	OBS
<b>Job Briefing Employee Name/Title</b>	RWIC #630 Escorts #679 and #601		<b>Accompanied Inspector?</b>	Y	<b>Out Brief Conducted</b>	Y	<b>Time</b>	0800 – 1400	<b>Outside Shift</b>	Yes
<b>Related Reports</b>	20160410-WMATA-WHW-1, 20161031-WMATA-AD-1, 20160814-WMATA-RPM-1, 20160812-WMATA-RPM-1,		<b>Related CAPS / Findings</b>							



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	20160411-WMATA-NAV-1											
Related Rules, SOPs, Standards, or Other	Ref		Rule or SOP			Standard		Other / Title		Checklist Reference		
	Permanent Order		T-16-07 rev. 1									
Inspection Location	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	Track Type	At-grade	Tunnel	Elevated	N/A	
	X							X				
Line(s)	K-Line	Track Number	1&2	Chain Marker and/or Station(s)	From			To				
					K1 CM514+00 K2 CM690+00			K1 CM690+00 K2 CM514+00				
Vehicles	Head Car Number		Number of Cars		Equipment	N/A						
	N/A		N/A									
Description	The team did not observe any non-compliant actions during this walk. All train operators were compliant with Permanent Order T-16-07.							Number of Defects		0		
								Recommended Finding?		No		
								Remedial Action Required?		No		
								Recommended Reinspection?		No		
Remedial Action	N/A											

Photos:



Figure 1 - K1 CM588+80 - Expansion Joint Cable - WMATA repaired immediately



Figure 2 - ETS Boxes (Both) CM630+00

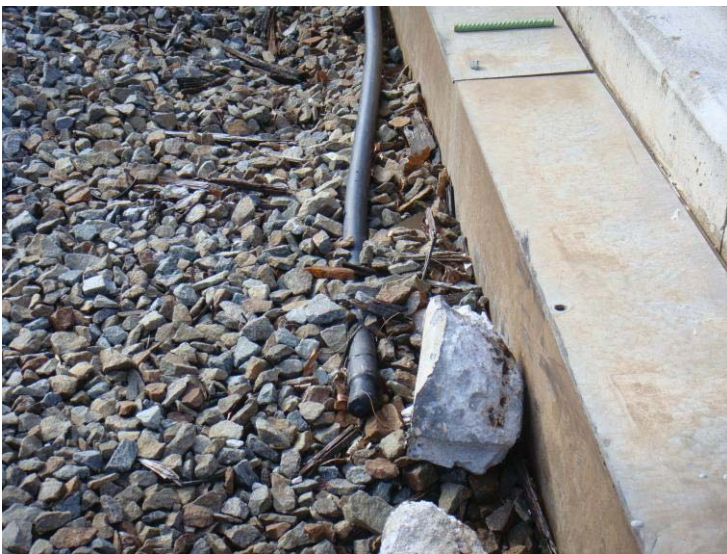


Figure 3 - K2 CM568+00 - X-over return lead lying against retaining wall



# Inspection Form

FOIA Exemption: All (b)(6)

Form FTA-IR-1

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## Agency/Department Information

Inspection Date	YYYY	MM	DD	Report Number	20170129-WMATA-AMD-1		
	2017	01	29				
Rail Agency Name	Washington Metropolitan Area Transit Authority			Rail Agency Department	TRST	Sub- Department	
Rail Agency Department Contact Information	Name		Email		Office Phone		Mobile Phone
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
Inspection Location	D line						

## Inspection Summary

Inspection Activity #	1	2	3	4	5	6
Activity Code	TRK-RWP-OBS	TRK-WI-OBS	TRK-WI-PI	TRK-WI-QAI		
Inspection Units	1	1	1	1		
Inspection Subunits	1	5	10	1		
Defects (Number)	0	4	10	0		
Recommended Finding	No	No	No	No		
Remedial Action Required <sup>1</sup>	No	No	Yes	No		
Recommended Reinspection	No	No	Yes	No		

## Activity Summaries

Inspection Activity #	1	Inspection Subject					Roadway Worker Protection			Activity Code		TRK	RWP	OBS
Job Briefing Employee Name/Title	RWIC 6185 Watchman/Lookout 6216			Accompanied Inspector?	Yes	Out Brief Conducted	No	Time	0800 to 1300	Outside Shift	Yes 0800 to 0830			
Related Reports				Related CAPS / Findings										
Related Rules, SOPs, Standards, or Other	Ref		Rule or SOP		Standard		Other / Title		Checklist Reference					
	RWPM													
Inspection Location	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	Track Type	At-grade	Tunnel	Elevated	N/A			
	X								X					
Line(s)	D	Track Number	1	Chain Marker and/or Station(s)		From		To						
						135+00		114+00						
Vehicles	Head Car Number		Number of Cars		Equipment		N/A							
	N/A		N/A											
Description	The RWIC conducted a thorough job safety briefing and identified the Watchman/Lookout and how effective warning would be provided. The Roadway Worker Protection (RWP) would be Train Approach Warning (TAW). After authority							Number of Defects		0				
								Recommended Finding?		No				
								Remedial Action Required?		No				

<sup>1</sup> The rail transit agency must provide FTA with the necessary evidence (e.g. maintenance work order system records, photos, documentation, records, data, or other evidence) to close out the Remedial Action. Closeout of Remedial Actions may also be subject to ongoing FTA verification inspections to ensure corrections are sufficient and effective.

Inspector in Charge – Signature	ANGELA M DLUGER		Digitally signed by ANGELA M DLUGER DN: c=US, o=U.S. Government, ou=FTA HQ, ou=DOT Headquarters, cn=ANGELA M DLUGER Date: 2017.02.03 17:11:42 -05'00'	Date February 3, 2017
Inspector in Charge – Name	Angela Dluger			
Inspection Team	Kevin McDonald			

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	was granted from the Rail Operations Control Center (ROCC), the Watchman/Lookout used Individual Train Detection (ITD) to enter the track zone and established TAW.	Recommended Re-inspection?	No
Remedial Action	N/A		

Inspection Activity #	2	Inspection Subject	Track inspection/observation				Activity Code	TRK	WI	OBS						
Job Briefing Employee Name/Title	RWIC 6185 Watchman/Lookout 6216		Accompanied Inspector?	Yes	Out Brief Conducted	No	Time	0800 to 1300	Outside Shift	Yes 0800 to 0830						
Related Reports	Related CAPS / Findings															
Related Rules, SOPs, Standards, or Other	Ref	Rule or SOP		Standard		Other / Title		Checklist Reference								
	MSRPH	Permanent Order T-16-07 revision 1														
	MSRPH	4.227 (d)														
Inspection Location	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	Track Type	At-grade	Tunnel	Elevated	N/A					
	X								X							
Line(s)	D	Track Number	1	Chain Marker and/or Station(s)	From			To								
					135+00			114+00								
Vehicles	Head Car Number		Number of Cars		Equipment	N/A										
	N/A		N/A													
Description	<p>The inspector observed four violations of Permanent Order T-16-07 rev. 1, section B, bullet point 4, which states that trains must "continue at 10 MPH until the entire train is past personnel." The last car of a 6 car WMATA train must not pass the work crew before 30 seconds have elapsed. However the following was observed:</p> <ul style="list-style-type: none"><li>At 0835 hours, a 6 car train outbound from Capitol South station with head end car # 6086 approached work crew members on catwalk at 10 MPH then rapidly accelerated. The rear end car passed crew members within 24 seconds.</li><li>At 0849 hours, a 6 car train outbound from Capitol South station with head end car # 6039 approached work crew members on catwalk at 10 MPH then rapidly accelerated. The rear end car passed crew members within 25 seconds.</li><li>At 0933 hours, a 6 car train outbound from Capitol South station with head end car # 5023 approached work crew members on catwalk at 10 MPH then rapidly accelerated. The rear end car passed crew members within 22 seconds.</li><li>At 1103 hours, a 6 car train outbound from Capitol South station with head end car # 5086 approached work crew members on catwalk at 10 MPH then rapidly accelerated. The rear end car passed crew members within 20 seconds.</li></ul> <p>FTA has issued previous remedial actions concerning P.O. T-16-0-7 and continues to monitor compliance.</p>							Number of Defects		4						
	Recommended Finding?		No													
	Remedial Action Required?		No													
								Recommended Re-inspection?		No						
Remedial Action	N/A															

Inspection Activity #	3	Inspection Subject	Track inspection/physical inspection				Activity Code	TRK	WI	PI
Job Briefing Employee Name/Title	RWIC 6185 Watchman/Lookout 6216		Accompanied Inspector?	Yes	Out Brief Conducted	No	Time	0800 to 1300	Outside Shift	Yes 0800 to 0830
Related Reports	Related CAPS / Findings									
Related Rules, SOPs, Standards, or Other	Ref	Rule or SOP		Standard		Other / Title		Checklist Reference		
	TRST 1000	Section 5.11.7 & table 5.10; section 6.14.2.1 &								



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	table 6.4; section 3.2.2.4										
Inspection Location	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	Track Type	At-grade	Tunnel	Elevated	N/A
	X								X		
Line(s)	D	Track Number	1	Chain Marker and/or Station(s)	From		To				
					135+00		114+00				
Vehicles	Head Car Number		Number of Cars		Equipment	N/A					
	N/A		N/A								
Description	<p>The following issues were observed:</p> <ul style="list-style-type: none"> <li>Low rail spalling, left rail, 131+00219+90. Per TRST 1000 section 5.11.7 and table 5.10: "Spalling (Flaking): If a Track Supervisor or Track Walker determines that condition requires rail to be replaced: A: Limit speed to 5, 15, or 40 MPH. H: Replace Rail. If a Track Supervisor or Track Walker determines that condition does not require rail to be replaced: E: Limit speed to 40 MPH and schedule rail for grinding, welding, or replacement"</li> <li>Cracked grout pads, 130+20 (5 in a row), 128+60, 125+50, 115+50, and 114+20</li> <li>Tunnel lining leaks: 121+40, 119+00, 117+50, and 115+00. These tunnel lining leaks are on the catwalk, which creates a slipping hazard on the narrow walkway.</li> </ul>							Number of Defects		10	
								Recommended Finding?		No	
								Remedial Action Required?		Yes	
								Recommended Re-inspection?		Yes	
Remedial Action	<ul style="list-style-type: none"> <li>WMATA must categorize and address the low rail spalling at 131+00.</li> <li>Per TRST 1000, section 6.14.2.1 and table 6.4, WMATA must remove defective grout pads and replace with new re-enforced concrete pad at 130+20.</li> <li>Per TRST 1000, section 6.14.2.1 and table 6.4, WMATA must remove defective grout pads and replace with new re-enforced concrete pad at 128+60.</li> <li>Per TRST 1000, section 6.14.2.1 and table 6.4, WMATA must remove defective grout pads and replace with new re-enforced concrete pad at 125+50.</li> <li>Per TRST 1000, section 6.14.2.1 and table 6.4, WMATA must remove defective grout pads and replace with new re-enforced concrete pad at 115+50.</li> <li>Per TRST 1000, section 6.14.2.1 and table 6.4, WMATA must remove defective grout pads and replace with new re-enforced concrete pad at 114+20.</li> <li>Per TRST 1000, section 3.2.2.4, WMATA must seal tunnel lining leaks to provide for a dry and safe catwalk at 121+40.</li> <li>Per TRST 1000, section 3.2.2.4, WMATA must seal tunnel lining leaks to provide for a dry and safe catwalk at 119+00.</li> <li>Per TRST 1000, section 3.2.2.4, WMATA must seal tunnel lining leaks to provide for a dry and safe catwalk at 117+50.</li> <li>Per TRST 1000, section 3.2.2.4, WMATA must seal tunnel lining leaks to provide for a dry and safe catwalk at 115+00.</li> </ul>										

Inspection Activity #	4	Inspection Subject	Track Inspection/quality assessment of contractors				Activity Code		TRK	WI	QAI
Job Briefing Employee Name/Title	RWIC 6185 Watchman/Lookout 6216			Accompanied Inspector?	Yes	Out Brief Conducted	No	Time	0800 to 1300	Outside Shift	Yes 0800 to 0830
Related Reports				Related CAPS / Findings							
Related Rules, SOPs, Standards, or Other	Ref		Rule or SOP		Standard		Other / Title		Checklist Reference		
Inspection Location	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	Track Type	At-grade	Tunnel	Elevated	N/A
	X								X		
Line(s)	D	Track Number	1	Chain Marker and/or Station(s)	From		To				
					135+00		114+00				
Vehicles	Head Car Number		Number of Cars		Equipment	N/A					
	N/A		N/A								
Description	The FWSO inspector observed contract inspectors performing required WMATA track inspections. Contract inspectors performed detailed turnout and switch							Number of Defects		0	
								Recommended Finding?		No	





	<p>inspections to include gauge, crosslevel, guard face gauge, flangeway width and depth, fasteners, and surface and alignment. Contractors performed a thorough and comprehensive inspection.</p> <p>Contractors are limiting inspections to track, geometry, fasteners and not to operating practices. Contractors may be using or piloting the new draft TRST 1000, revision 7, which will be submitted to FWSO at the end of February.</p> <p>Contract inspectors are listing loose anchor bolt washers as a defective condition, even though the anchor bolt itself is 90% to 95% solidly inserted into the concrete pad. Per TRST 1000, section 7.9.2.5 (b), the FWSO inspector does <i>not</i> concur.</p> <p><i>7.9.2.5 section (b): "Direct fixation fasteners are considered defective from a maintenance point of view when: a) The rail clip is broken; b) One anchor bolts is missing, broken, or so loose as to be rendered ineffective on one pad".</i></p> <p>These anchor bolts are not loose, only the washer is.</p>	<b>Remedial Action Required?</b>	No
		<b>Recommended Re-inspection?</b>	No
<b>Remedial Action</b>	N/A		

Photos:









# Inspection Form

FOIA Exemption: All (b)(6)  
Form FTA-IR-1

United States Department of Transportation  
Federal Transit Administration

## Agency/Department Information

Inspection Date	YYYY	MM	DD	Report Number	20170130-WMATA-AD-1		
	2017	01	30				
Rail Agency Name	Washington Metropolitan Area Transit Authority			Rail Agency Department	TRST	Sub- Department	Maintenance
Rail Agency Department Contact Information	Name		Email		Office Phone		Mobile Phone
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
Inspection Location	A Line, track 1, between Bethesda (A-09) and Medical Center (A-10)						

## Inspection Summary

Inspection Activity #	1	2	3	4	5	6
Activity Code	TRK-RWP-OBS	TRK-GEN-INS				
Inspection Units	1	1				
Inspection Subunits	27	3				
Defects (Number)	0	3				
Recommended Finding	No	Yes				
Remedial Action Required <sup>1</sup>	No	Yes				
Recommended Reinspection	No	Yes				

## Activity Summaries

Inspection Activity #	1	Inspection Subject					Roadway Worker Protection – Job Safety Briefing			Activity Code		TRK	RWP	OBS
Job Briefing Employee Name/Title	TRST UNIT 6172 SAFE UNIT 207					Accompanied Inspector?	Yes	Out Brief Conducted	Yes	Time	1000 1330	Outside Shift	No	
Related Reports						Related CAPS / Findings								
Related Rules, SOPs, Standards, or Other	Ref		Rule or SOP			Standard			Other / Title		Checklist Reference			
	RWPM													
Inspection Location	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	Track Type	At-grade	Tunnel	Elevated	N/A			
	X		X						X					
Line(s)	A Line		Track Number	1	Chain Marker and/or Station(s)			From Bethesda A-09		To Medical Center A-10				
Vehicles	Head Car Number		Number of Cars			Equipment	N/A							
	N/A		N/A											
Description	The job safety briefing was provided by TRST Unit 6172 at the briefing table, Bethesda Station. The briefing was thorough and fully compliant with WMATA requirements. It included WMATA level 1 ID check, personal protective equipment								Number of Defects		0			
									Recommended Finding?		No			
									Remedial Action Required?		No			

<sup>1</sup> The rail transit agency must provide FTA with the necessary evidence (e.g. maintenance work order system records, photos, documentation, records, data, or other evidence) to close out the Remedial Action. Closeout of Remedial Actions may also be subject to ongoing FTA verification inspections to ensure corrections are sufficient and effective.

Inspector in Charge - Signature		Date	
AMBUR I DALEY			
Inspector in Charge – Name Ambur Daley	Inspection Team Alexander Nepa		



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	(PPE) inspection, type of protection in place, potential hazards and hot spots, the hospital location, and the safety rule (4.71). The FWSO inspector observed the application of shunts, warning lights, and work zone mats. All roadway workers had the required PPE. No exceptions were taken with the job safety briefing or the work zone set-up.	<b>Recommended Reinspection?</b>	No
<b>Remedial Action</b>	N/A		

<b>Inspection Activity #</b>	2	<b>Inspection Subject</b>	Track General Inspection				<b>Activity Code</b>	TRK	GEN	INS			
<b>Job Briefing Employee Name/Title</b>	SAFE UNIT 207			<b>Accompanied Inspector?</b>	Yes	<b>Out Brief Conducted</b>	Yes	<b>Time</b>	1100 1330	<b>Outside Shift</b> No			
<b>Related Reports</b>	<b>Related CAPS / Findings</b>												
<b>Related Rules, SOPs, Standards, or Other</b>	Ref	Rule or SOP		Standard			Other / Title		Checklist Reference				
	TRST 1000												
<b>Inspection Location</b>	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	<b>Track Type</b>	At-grade	Tunnel	Elevated	N/A		
	X								X				
<b>Line(s)</b>	Red Line	<b>Track Number</b>	1	<b>Chain Marker and/or Station(s)</b>			From		To				
							Bethesda, A-09		Medical Center, A-10				
<b>Vehicles</b>	Head Car Number		Number of Cars			<b>Equipment</b>	N/A						
	N/A		N/A										
<b>Description</b>	An inspection of A Line track 1 was made from WMATA's prime mover while traveling the work zone, and the following defects were noticed: <ul style="list-style-type: none"><li>At CM 363+00, missing end cover board. (TRST 1000, 13.3.15)</li><li>At CM 325+00 missing cover board. (TRST 1000, 13.3.15)</li><li>At CM 407+10, unsecure tunnel light. One side was not secured, allowing light to hang. (TRST 1000, 10.15)</li></ul>						<b>Number of Defects</b>		3				
							<b>Recommended Finding?</b>		Yes				
							<b>Remedial Action Required?</b>		Yes				
							<b>Recommended Reinspection?</b>		Yes				
<b>Remedial Action</b>	<ul style="list-style-type: none"><li>At CM 363+00, WMATA must replace the missing end cover board.</li><li>At CM 325+00, WMATA must replace the missing cover board.</li><li>At CM 407+10, WMATA must secure the hanging tunnel light.</li></ul>												



# Inspection Form

FOIA Exemption: All (b)(6)

Form FTA-IR-1

United States Department of Transportation  
Federal Transit Administration

## Agency/Department Information

Inspection Date	YYYY	MM	DD	Report Number	20170130-WMATA-AD-2		
	2017	01	30				
Rail Agency Name	Washington Metropolitan Area Transit Authority			Rail Agency Department	RTRA	Sub- Department	N/A
Rail Agency Department Contact Information	Name		Email		Office Phone		Mobile Phone
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
Inspection Location	Orange Line, Metro Center						

## Inspection Summary

Inspection Activity #	1	2	3	4	5	6
Activity Code	RTRA-RI-OBS					
Inspection Units	1					
Inspection Subunits	N/A					
Defects (Number)	0					
Recommended Finding	No					
Remedial Action Required <sup>1</sup>	No					
Recommended Reinspection	No					

## Activity Summaries

Inspection Activity #	1	Inspection Subject				Rail Compliance Observation			Activity Code		RTRA	RI	OBS
Job Briefing Employee Name/Title	N/A				Accompanied Inspector?	No	Out Brief Conducted	No	Time	1500-1900	Outside Shift	Yes	
Related Reports	N/A				Related CAPS / Findings		N/A						
Related Rules, SOPs, Standards, or Other	Ref		Rule or SOP			Standard		Other / Title		Checklist Reference			
	MetroRail Safety Rules and Procedures Handbook Permanent Order No. T-16-07		MSRPH General Rules 1.46-1.52 1.69-1.84 MSRPH Operating Rules 3.87 3.119, 3.120, 3.121,3.121.1, 3.79.1, 3.141 SOP# 12, 15, 16, 35, 45, 50										
Inspection Location	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	Track Type	At-grade	Tunnel	Elevated	N/A		
	x		x									x	
Line(s)	Orange	Track Number	N/A	Chain Marker and/or Station(s)	From				To				

<sup>1</sup> The rail transit agency must provide FTA with the necessary evidence (e.g. maintenance work order system records, photos, documentation, records, data, or other evidence) to close out the Remedial Action. Closeout of Remedial Actions may also be subject to ongoing FTA verification inspections to ensure corrections are sufficient and effective.

Inspector in Charge - Signature	<b>AMBUR I DALEY</b> <small>Digitally signed by AMBUR I DALEY DN: c=US, o=U.S. Government, ou=DOT Headquarters, ou=FMCSAHQ, cn=AMBUR I DALEY Date: 2017.02.06 10:40:18 -05'00'</small>		Date
Inspector in Charge - Name	Inspection Team		
Ambur Daley	Chris Difatta		





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Vehicles	Head Car Number	Number of Cars	Equipment	N/A			
	N/A	N/A					
Description	<p>An FWSO Inspector conducted observations on the Orange Line at Metro Center. The FWSO Inspector positioned himself at the 8 car berthing mark on the station platform to observe train operator compliance with the following:</p> <ul style="list-style-type: none"><li>Operated to 8 car station berthing marker at the end of the platform.</li><li>Head out of the window when stopping an 8 car consist.</li><li>Application of good train handling with smooth station stops and smooth and even acceleration and deceleration.</li><li>Verified platform side of the train by sticking his/her head out of the cab window.</li><li>Looked at doors on platform side of train to verify any activity in front of the doors for five (5) seconds before opening the doors.</li><li>Opened the doors on the correct platform side, and made station announcements.</li><li>Observed train loading with head outside cab window to ensure that customers were not hit or trapped within doors.</li><li>Closed the window and looked in the direction of travel before moving the train forward.</li></ul> <p>Sixteen trains were observed, and no exceptions were taken.</p> <p>The FWSO Inspector observed train operations from New Carrollton to Metro Center to observe train operator compliance with announcement requirements, including the following:</p> <ul style="list-style-type: none"><li>Made proper announcements when departing initial terminal.</li><li>Made proper announcements when berthed at the station.</li><li>Made announcement when train stopped due to another train crossing over.</li><li>Made proper announcements when train would be arriving at terminal.</li></ul> <p>No exceptions were taken during this observation.</p>			Number of Defects		0	
				Recommended Finding?		No	
				Remedial Action Required?		No	
				Recommended Reinspection?		No	
Remedial Action	N/A						



# Inspection Form

FOIA Exemption: All (b)(6)

Form FTA-IR-1

United States Department of Transportation  
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## Agency/Department Information

Inspection Date	YYYY	MM	DD	Report Number	20170130-WMATA-AD-3		
	2017	01	30				
Rail Agency Name	Washington Metropolitan Area Transit Authority			Rail Agency Department	ROCC	Sub- Department	N/A
Rail Agency Department Contact Information	Name		Email		Office Phone		Mobile Phone
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
Inspection Location	Carmen Turner Facility 3500 Pennsy Drive, Hyattsville, MD 20785						

## Inspection Summary

Inspection Activity #	1	2	3	4	5	6
Activity Code	ROCC-RC-OBS					
Inspection Units	1					
Inspection Subunits	0					
Defects (Number)	0					
Recommended Finding	No					
Remedial Action Required <sup>1</sup>	No					
Recommended Reinspection	No					

## Activity Summaries

Inspection Activity #	1	Inspection Subject			Rules Compliance & Safety Management Inspection (SMI) Required Actions Observation of Rail Traffic Controllers (RTC's)			Activity Code		ROCC	RC	OBS
Job Briefing Employee Name/Title	N/A			Accompanied Inspector?	N/A	Out Brief Conducted	Yes	Time	Various	Outside Shift	No	
Related Reports	Safety Management Inspection (SMI), Final Report, June 17, 2015			Related CAPS / Findings		Required Actions: R-1-7-b						
Related Rules, SOPs, Standards, or Other	Ref		Rule or SOP		Standard		Other / Title		Checklist Reference			
	MetroRail Safety Rules and Procedures Handbook				X		X		X			
	Permanent Order		NO. T-16-10									
Inspection Location	Main Track	Yard	Station	OCC	RTA Facility	Main Track	Yard	At-grade	Tunnel	Elevated	N/A	
				X							X	
Line(s)	N/A	Track Number	N/A	Chain Marker and/or Station(s)		From			To			
						N/A			N/A			
Vehicles	Head Car Number		Number of Cars		Equipment		N/A					
	N/A		N/A									
Description	An FWSO inspector conducted random audits of console reference materials							Number of Defects		0		

<sup>1</sup> The rail transit agency must provide FTA with the necessary evidence (e.g. maintenance work order system records, photos, documentation, records, data, or other evidence) to close out the Remedial Action. Closeout of Remedial Actions may also be subject to ongoing FTA verification inspections to ensure corrections are sufficient and effective.

Inspector in Charge - Signature	AMBUR I DALEY		Digitally signed by: AMBUR I DALEY DN: c=US, o=U.S. Government, ou=DOT Headquarters, ou=FMCSAHQ, cn=AMBUR I DALEY Date: 2017.02.07 10:14:01 -05'00'	Date
Inspector in Charge - Name	Ambur Daley		Inspection Team	Tamara Powell

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Version date: 8/26/16



	available for all three Ops stations over the course of four shifts, in response to recent investigations of rail traffic controller (RTC) performance following incidents.	Recommended Finding?	No
	Observations related to SMI report findings: <ul style="list-style-type: none"><li>• <i>R-1-7-b: "WMATA must enhance RTC reference materials to direct internal operations at the ROCC, including the use of the Advanced Information Management System, visual schematics of WMATA stations and facilities, and internal ROCC administrative policies and procedures."</i><ul style="list-style-type: none"><li>○ There were several different reference materials available at each console to assist with troubleshooting, internal policy, general information, and special orders, as follows:<ul style="list-style-type: none"><li>▪ <i>Power Reconfiguration Playbook</i> – Assists with identification and activation of power breakers. (Available at all three Ops consoles)</li><li>▪ <i>TRST Specialized Equipment</i> – Provides visual reference of right-of-way (ROW) equipment and vehicles used by track personnel, not including revenue vehicles. (Available on all three Ops consoles)</li><li>▪ <i>Office of Emergency Management (OEM) CB-EMIS Guidebook</i> – A reference guide for chemical biological emergency management information system, including alarms, purpose, and response. (Available on all three Ops consoles)</li><li>▪ <i>Roadway Protection Manual (2014)</i> – The current manual for roadway worker policies, procedures, and rules. (Available on all three Ops consoles)</li><li>▪ <i>Rail Transportation Standard Radio Verbiage (2013)</i> – The ROCC internal guide regarding proper radio protocol and procedures (Available on all three Ops consoles)<ul style="list-style-type: none"><li>▪ <b>Exception noted:</b> The manual did not contain information from current radio communication class, nor recent Permanent Order No. T-16-10.</li><li>▪ ROCC will conduct a review of the manual to include current policies and procedures, specifically 100% read-back and "over" &amp; "out" mandate.</li></ul></li><li>▪ <i>Ops Resource Binder (not dated)</i> – A compilation of all relevant information, ROCC policies &amp; procedures, memorandums, plus general information and reference material specific to each console. (Available on all three Ops consoles)<ul style="list-style-type: none"><li>▪ <b>Exception noted:</b> The inspector found discrepancies of information after a quality control check. Some binders had information others binders were missing. ROCC was advised to perform a review of binders for updated information and consistency of information provided across each console.</li><li>▪ ROCC has taken the inspector's recommendation under advisement and will notify inspector once review and update is complete.</li></ul></li><li>▪ <i>MSRPH (Metro Safety Rules and Procedures Handbook)</i> – The Metro employee rulebook<ul style="list-style-type: none"><li>▪ <b>Exception noted:</b> The rulebook was missing on Ops 2 console, but the discrepancy was reconciled.</li></ul></li><li>▪ <i>ROCC Procedures Manual (2011)</i> – The procedures handbook specific to ROCC employees. (Available on all three Ops consoles)<ul style="list-style-type: none"><li>▪ <b>Exception noted:</b> This version of the manual was outdated. The updated version 2015 of the manual was also present (see below). The ROCC pulled the 2011 handbook from all consoles.</li></ul></li><li>▪ <i>ROCC Procedures Manual (2015)</i> – The procedures handbook specific to ROCC employees. (Available on all three Ops consoles)</li><li>▪ Emergency SOPs Checklists – All checklists that support and coincide with current SOPs for the ROCC. (Available on all three Ops consoles)</li></ul></li></ul></li></ul>	Remedial Action Required?	No
		Recommended Reinspection?	Yes



	<ul style="list-style-type: none"><li>▪ The checklist has since undergone revisions, and is currently under FTA review.</li><li>▪ <i>Troubleshooting Guide</i> – The RTC reference manual to troubleshoot train defects and anomalies. (Available on all three Ops consoles)</li><li>▪ <i>Troubleshooting Guide (7K Train Series)</i> – The troubleshooting guide specific to the 7K series.<ul style="list-style-type: none"><li>▪ <b>Exception noted:</b> The guide was missing on Ops 2 console, and the guide appeared to be incomplete.</li></ul></li><li>▪ The ROCC responded to this observation by noting that the troubleshooting guide will be updated based on the two-day 7k series refresher curriculum the Training Department developed. All RTCs are currently participating in or scheduled to participate in this mandatory training.</li><li>▪ <i>ROCC Daily Activity Log</i> – The recording log for all defects and line anomalies. This working document is updated daily. (Available on all three Ops consoles)</li></ul> <p>The FWSO Inspector spoke with Acting ROCC Director, and will conduct follow up on exceptions taken during this observation that have not yet been addressed.</p>		
Remedial Action	N/A		



# Inspection Form

FOIA Exemption: All (b)(6)

Form FTA-IR-1

United States Department of Transportation  
Federal Transit Administration

## Agency/Department Information

Inspection Date	YYYY	MM	DD	Report Number	20170131-WMATA-AMD-1		
	2017	01	31				
Rail Agency Name	Washington Metropolitan Area Transit Authority			Rail Agency Department	RTRA	Sub- Department	N/A
Rail Agency Department Contact Information	Name		Email		Office Phone		Mobile Phone
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
Inspection Location	Shady Grove Yard						

## Inspection Summary

Inspection Activity #	1	2	3	4	5	6
Activity Code	RTRA-RI-OBS					
Inspection Units	1					
Inspection Subunits	N/A					
Defects (Number)	0					
Recommended Finding	No					
Remedial Action Required <sup>1</sup>	No					
Recommended Reinspection	No					

## Activity Summaries

Inspection Activity #	1	Inspection Subject				Rules Compliance Inspection			Activity Code		RTRA	RI	OBS
Job Briefing Employee Name/Title	John DeFilippo				Accompanied Inspector?	Yes	Out Brief Conducted	Yes	Time	0900-1300	Outside Shift	No	
Related Reports	N/A				Related CAPS / Findings		N/A						
Related Rules, SOPs, Standards, or Other	Ref	Rule or SOP			Standard			Other / Title		Checklist Reference			
	MetroRail Safety Rules and Procedures Handbook	MSRPH General Rules 1.46-1.52 1.69-1.84 MSRPH Operating Rules 3.87 3.119, 3.120, 3.121, 3.121.1, 3.79.1, 3.141 SOP# 12, 15, 16, 35, 45, 50											
Inspection Location	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	Track Type	At-grade	Tunnel	Elevated	N/A		
		x										x	
Line(s)	N/A	Track		N/A	Chain Marker		From			To			

<sup>1</sup> The rail transit agency must provide FTA with the necessary evidence (e.g. maintenance work order system records, photos, documentation, records, data, or other evidence) to close out the Remedial Action. Closeout of Remedial Actions may also be subject to ongoing FTA verification inspections to ensure corrections are sufficient and effective.

Inspector in Charge - Signature	ANGELA M DLUGER		Digitally signed by ANGELA M DLUGER DN: c=US, o=U.S. Government, ou=FTA HQ, ou=DOT Headquarters, cn=ANGELA M DLUGER Date: 2017.02.03 17:17:58 -05'00'	Date February 3, 2017
Inspector in Charge - Name	Angela Dluger			
Inspection Team	Chris Difatta			



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		Number		and/or Station(s)	N/A	N/A
Vehicles	Head Car Number	Number of Cars		Equipment	N/A	
	N/A	N/A				
Description	An FWSO Inspector conducted observations at the Shady Grove Rail Facility, the following yard observations were conducted: <ul style="list-style-type: none"><li>• Securement:<ul style="list-style-type: none"><li>○ FWSO Inspector conducted observations on 7 train sets for handbrake compliance. All seven were in compliance with Operating Rule 3.126.</li></ul></li><li>• Daily put ins:<ul style="list-style-type: none"><li>○ FWSO Inspector positioned himself in the Interlocking Operator's Control Tower and observed daily put ins. A total of 17 train sets arrived into the yard for layover. No exceptions were taken.</li></ul></li><li>• Radio procedures:<ul style="list-style-type: none"><li>○ FWSO inspector observed compliant radio communication with regard to the "over and out" requirements and positive "word for word" repeat back.</li></ul></li><li>• Safety Stops:<ul style="list-style-type: none"><li>○ FWSO inspector observed 9 trains arrive at the facility and checked for proper safety stops. All trains were in compliance with Operating Rule 3.89.</li></ul></li></ul> No exceptions were taken during inspection.				Number of Defects	0
					Recommended Finding?	No
					Remedial Action Required?	No
					Recommended Reinspection?	No
	Remedial Action	N/A				





# Inspection Form

FOIA Exemption: All (b)(6)

Form FTA-IR-1

United States Department of Transportation  
Federal Transit Administration

## Agency/Department Information

Inspection Date	YYYY	MM	DD	Report Number	20170131-WMATA-AMD-2		
	2017	01	31				
Rail Agency Name	Washington Metropolitan Area Transit Authority			Rail Agency Department	ROCC	Sub- Department	N/A
Rail Agency Department Contact Information	Name		Email		Office Phone		Mobile Phone
	[REDACTED]		[REDACTED]				
Inspection Location	Carmen Turner Facility 3500 Pennsy Drive, Hyattsville, MD 20785						

## Inspection Summary

Inspection Activity #	1	2	3	4	5	6
Activity Code	ROCC-RC-OBS					
Inspection Units	1					
Inspection Subunits	0					
Defects (Number)	0					
Recommended Finding	No					
Remedial Action Required <sup>1</sup>	No					
Recommended Reinspection	No					

## Activity Summaries

Inspection Activity #	1	Inspection Subject	Rules Compliance & Safety Management Inspection (SMI) Required Actions Observation of Rail Traffic Controllers (RTC)				Activity Code	ROCC	RC	OBS	
Job Briefing Employee Name/Title	N/A		Accompanied Inspector?	N/A	Out Brief Conducted	No	Time	1100-1500	Outside Shift	No	
Related Reports	Safety Management Inspection (SMI), Final Report, June 17, 2015		Related CAPS / Findings		Required Actions: R-3: R-1-3-a & R-1-3-b, R-1-6-a, R-1-8-a, and R-1-9-a						
Related Rules, SOPs, Standards, or Other	Ref		Rule or SOP		Standard		Other / Title		Checklist Reference		
	MetroRail Safety Rules and Procedures Handbook and Roadway Worker Protection Manual (2014)		Roadway Worker Protection—(3) Foul Time (FT) Protection		X		X		X		
	Permanent Order		NO. T-16-10								
Inspection Location	Main Track	Yard	Station	OCC	RTA Facility	Main Track	Yard	At-grade	Tunnel	Elevated	N/A
				X							X
Line(s)	N/A	Track Number	N/A	Chain Marker and/or Station(s)		From			To		
						N/A			N/A		
Vehicles	Head Car Number		Number of Cars		Equipment		N/A				
	N/A		N/A								

<sup>1</sup> The rail transit agency must provide FTA with the necessary evidence (e.g. maintenance work order system records, photos, documentation, records, data, or other evidence) to close out the Remedial Action. Closeout of Remedial Actions may also be subject to ongoing FTA verification inspections to ensure corrections are sufficient and effective.

Inspector in Charge - Signature	<b>ANGELA M DLUGER</b>		Digitally signed by ANGELA M DLUGER DN: c=US, o=U.S. Government, ou=FTA HQ, ou=DOT Headquarters, cn=ANGELA M DLUGER Date: 2017.02.13 13:59:18 -05'00'	Date <b>February 13, 2017</b>
Inspector in Charge – Name Angela Dluger	Inspection Team Tamara Powell			

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Version date: 8/26/16



Description	<p>An FWSO inspector conducted an observation at the Rail Operations Control Center (ROCC) of the rail traffic controllers (RTC) on the afternoon shift at the Ops 2 console, which controls and over-see operations on the Orange, Silver, and Blue lines. The FWSO inspector performed an observation and compliance check that focused mainly on ROCC required actions and radio usage and operation (General Rules, #1.69 – 1.88 and Permanent Order T-16-10). The observation and compliance check were based on findings from the Safety Management Inspection (SMI) report (both open and closed findings), as well as rules from the MetroRail Safety Rules &amp; Procedures Handbook.</p> <p>Observations related to SMI report findings:</p> <ul style="list-style-type: none"><li>• Finding R-3: <i>“RTCs receive limited refresher training and no road days.”</i></li><li>• R-1-3-a: <i>“WMATA must establish a program to provide each RTC with mandatory road days for territory familiarization and to keep up with changing system elements.”</i></li><li>• R-1-3-b: <i>“WMATA must require all RTCs to obtain and maintain Level 4 Roadway Worker Protection training and certification.”</i><ul style="list-style-type: none"><li>○ The FWSO inspector observed the radio transmissions and performance of two RTCs. Both controllers have had Bridge Training (refresher course), and are RWP Level 4 trained and qualified.<ul style="list-style-type: none"><li>▪ RTC #1, the Radio Controller, has been employed at WMATA for 12 years, with 4.5 years in the ROCC.</li><li>▪ RTC #2, the Button Controller, was an external hire with former transit experience, and has almost 6 years at WMATA in the ROCC.</li></ul></li></ul></li><li>• R-1-6-a: <i>“WMATA must establish and enforce a proper protocol for language and terminology that is used over the radio – to include 100 percent word-for-word read-back for safety-related instructions and unusual train movements.”</i><ul style="list-style-type: none"><li>○ Personnel and units (11 crews from 1037 – 1141 hours) called onto the right-of-way (ROW) for afternoon access. Most crews were under the RWP protection Train Approach Warning (TAW) and one was under Exclusive Track Occupancy (ETO).</li><li>○ All personnel, units, and operators performed word-for-word confirmation of working and clearance rights on the ROW. The RTC acknowledged full understanding of transmission over the radio and provided 100% repeat-back for all requests.</li><li>○ For each communication loop, RTCs closed out each transmission with “over,” closing the loop with “Central out.”</li></ul></li><li>• R-1-8-a: <i>“WMATA must establish a clear policy that prohibits distractions from the use of cell phones and other electronic devices in the ROCC.”</i><ul style="list-style-type: none"><li>○ The inspector observed no cell phone or electronic device violations from any unauthorized ROCC personnel during observation period.</li></ul></li><li>• R-1-9-a: <i>“Until such time as electronic transfer records are implemented, WMATA must ensure that its Rail Traffic Controllers use paper-based logs with formal signatures.”</i><ul style="list-style-type: none"><li>○ ROCC has implemented an internal policy requiring all RTCs to sign onto the AIM system upon shift change.</li><li>○ <b>Exception noted:</b> During the afternoon shift change, the inspector observed one RTC arrive and immediately start performing duties after receiving instruction from the off-duty RTC. The RTC did not sign onto the AIM system. However, the second RTC did properly sign onto the AIM system.</li></ul></li></ul> <p>Observations related to Roadway Worker Protection Manual (2014):</p> <ul style="list-style-type: none"><li>• <i>Roadway Worker Protection—(3) Foul Time (FT) Protection: “FT Protection is coordinating with ROCC to STOP all rail traffic in the specific area for a limited amount of time.”</i><ul style="list-style-type: none"><li>○ At 0240 hours, a unit requested FT protection at Arlington</li></ul></li></ul>	Number of Defects	0
		Recommended Finding?	No
		Remedial Action Required?	No
		Recommended Reinspection?	No



	<p>Cemetery.</p> <ul style="list-style-type: none"><li>○ The RTC immediately stopped all trains in the vicinity, making positive contact with all train operators in the area.</li><li>○ As an added protection, RTC placed prohibit exits on all signals in the area.</li><li>○ The RTC granted permission to the unit to access the ROW.</li><li>○ At 0243 hours, the unit relinquished FT and reported clear of the ROW.</li><li>○ There were no exceptions noted during observation period.</li></ul>		
Remedial Action	N/A		



# Inspection Form

FOIA Exemption: All (b)(6)

Form FTA-IR-1

United States Department of Transportation  
Federal Transit Administration

## Agency/Department Information

Inspection Date	YYYY	MM	DD	Report Number	20170131-WMATA-CB-1		
	2017	01	31				
Rail Agency Name	Washington Metropolitan Area Transit Authority			Rail Agency Department	TRST	Sub- Department	TKIN
Rail Agency Department Contact Information	Name			Email		Office Phone	
	[REDACTED]			[REDACTED]		[REDACTED]	
	[REDACTED]			[REDACTED]		[REDACTED]	
	[REDACTED]			[REDACTED]		[REDACTED]	
	[REDACTED]			[REDACTED]		[REDACTED]	
	[REDACTED]			[REDACTED]		[REDACTED]	
Inspection Location	Stadium-Armory to Minnesota Ave on the D-Line, Track 2						

## Inspection Summary

Inspection Activity #	1	2	3	4	5	6
Activity Code	TRK-JSB-OBS	TRK-WI-PI				
Inspection Units	1	1				
Inspection Subunits	0	1				
Defects (Number)	0	3				
Recommended Finding	No	No				
Remedial Action Required <sup>1</sup>	No	Yes				
Recommended Reinspection	No	Yes				

## Activity Summaries

Inspection Activity #	1	Inspection Subject					Job Safety Briefing			Activity Code		TRK	JSB	OBS
Job Briefing Employee Name/Title	TRST 626					Accompanied Inspector?	Yes	Out Brief Conducted	No	Time	1000-1230	Outside Shift	No	
Related Reports	N/A					Related CAPS / Findings			No					
Related Rules, SOPs, Standards, or Other	Ref		Rule or SOP			Standard			Other / Title		Checklist Reference			
	RWPM													
	MSRPH													
Inspection Location	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	Track Type	At-grade	Tunnel	Elevated	N/A			
	X							X	X	X				
Line(s)	D	Track Number	2	Chain Marker and/or Station(s)			From		To					
							212+00		314+00					
Vehicles	Head Car Number		Number of Cars			Equipment	N/A							
	N/A		N/A											
Description	TRST 626 provided a comprehensive job safety briefing. The briefing included the									Number of Defects		0		

<sup>1</sup> The rail transit agency must provide FTA with the necessary evidence (e.g. maintenance work order system records, photos, documentation, records, data, or other evidence) to close out the Remedial Action. Closeout of Remedial Actions may also be subject to ongoing FTA verification inspections to ensure corrections are sufficient and effective.

Inspector in Charge - Signature	<b>CHAD DAVID BROSKI</b>	Digitally signed by CHAD DAVID BROSKI DN: c=US, o=U.S. Government, ou=FRA FRACicagolL, ou=DOT FRACicagolL, cn=CHAD DAVID BROSKI Date: 2017.02.02 12:06:24 -06'00'	Date
Inspector in Charge - Name	Chad Broski		
Inspection Team	Chad Broski		



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	work limits, the protection that would be used (Train Approach Warning with an Advanced Watchman/Lookout), hazards that would be encountered, and the required Personal Protective Equipment (PPE). TRST 626 also reviewed the Roadway Access Guide pertaining to our inspection limits. He then inspected the work group to ensure they had the necessary PPE and Roadway Worker Protection (RWP) training. He also required the work group to acknowledge understanding of the on-track safety procedures.							Recommended Finding?		No
								Remedial Action Required?		No
								Recommended Reinspection?		No
Remedial Action		N/A								

Inspection Activity #	2	Inspection Subject	Remedial Action Verification					Activity Code		TRK	WI	PI
Job Briefing Employee Name/Title	TRST 626		Accompanied Inspector?	Yes	Out Brief Conducted	No	Time	1000-1230	Outside Shift	No		
Related Reports	20160406-WMATA-MWP-1 20170119-WMATA-WP-2		Related CAPS / Findings			No						
Related Rules, SOPs, Standards, or Other	Ref		Rule or SOP		Standard		Other / Title		Checklist Reference			
	RWPM				TRST 1000		Permanent Order No. T-16-07, Rev. 1					
	MSRPH											
Inspection Location	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	Track Type	At-grade	Tunnel	Elevated	N/A	
	X							X	X	X		
Line(s)	D	Track Number	2	Chain Marker and/or Station(s)	From			To				
					212+00			314+00				
Vehicles	Head Car Number		Number of Cars		Equipment	N/A						
	N/A		N/A									
Description	<p>The FWSO inspector performed remedial action verification between chain markers (CM) 212+00 and 314+00 on main track D2.</p> <p>Observations:</p> <ul style="list-style-type: none"> <li>The on-track safety complied with the RWPM. Train Approach Warning Protection with Advanced Watchmen/Lookouts allowed ample time to clear for on-coming trains.</li> <li>All trains complied with Permanent Order No. T-16-07, Rev. 1.</li> <li>The following FWSO remedial actions on main track D2 between CM 212+00 and CM 314+00 have not been repaired and/or replaced: ID # 123, 1077, 1078, 1079, 1080, 1081.</li> <li>FWSO remedial action ID # 122 has been corrected.</li> <li>FWSO noted that there is an abundant amount of water, nearly to the top of the grout pads, within the tunnel between CM D2 226+50 and CM D2 234+00. There is an unusually large quantity of water flowing into the invert at this location. The trough and inlets are plugged; thus, the water is not discharging at an effective rate causing the flooding to occur.</li> <li>FWSO noted that the 3<sup>rd</sup> rail anchor and numerous cover boards were detached at CM D2 266+20.</li> <li>FWSO noted grout pads cracking, crumbling, and/or failing, contributing to loose and missing fasteners adjacent to the control point signal at CM D2 272+90.</li> </ul>							Number of Defects		3		
								Recommended Finding?		No		
								Remedial Action Required?		Yes		
								Recommended Reinspection?		Yes		
Remedial Action		<ul style="list-style-type: none"> <li>WMATA must mitigate the water flow in the tunnel between CM D2 226+50 and CM D2 234+00.</li> <li>WMATA must repair and/or replace the 3<sup>rd</sup> rail anchor and missing cover boards at CM D2 266+20.</li> <li>WMATA must repair the failing grout pads at CM D2 272+90.</li> </ul>										